USDA United States Department of Agriculture

Natural Resources Conservation Service

Montana Basin Outlook Report February 1, 2002

Basin Outlook Reports
and
Federal - State - Private
Cooperative Snow Surveys

For more water supply and resource management information, contact:
See Attached List

How forecasts are made

Most of the annual streamflow in the Western United States originates as snowfall that has accumulated high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are combined with snowpack data to prepare runoff forecasts. Streamflow forecasts are coordinated by Natural Resources Conservation Service and National Weather Service hydrologists. This report presents a comprehensive picture of water supply conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data, and narratives describing current conditions.

Snowpack data are obtained by using a combination of manual and automated SNOTEL measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation and temperature are monitored on a daily basis and transmitted via meteor burst telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

Forecast uncertainty originates from two sources: (1) uncertainty of future hydrologic and climatic conditions, and (2) error in the forecasting procedure. To express the uncertainty in the most probable forecast, four additional forecasts are provided. The actual streamflow can be expected to exceed the most probable forecast 50% of the time. Similarly, the actual streamflow volume can be expected to exceed the 90% forecast volume 90% of the time. The same is true for the 70%, 30%, and 10% forecasts. Generally, the 90% and 70% forecasts reflect drier than normal hydrologic and climatic conditions; the 30% and 10% forecasts reflect wetter than normal conditions. As the forecast season progresses, a greater portion of the future hydrologic and climatic uncertainty will become known and the additional forecasts will move closer to the most probable forecast.

The United States Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs and marital or familial status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C., 20250, or call 1-800-245-6340 (voice) or (202) 720-1127 (TDD). USDA is an equal employment opportunity employer.

United States Department of Agriculture
Natural Resources Conservation Service
Bozeman, Montana

(406) 587-6811
10 E Babcock
Federal Bldg Room 443
Bozeman MT 59715

Where to Get More Information

This contact list provides you with the names and phone numbers of individuals who can provide more detailed snow survey information for each county.

Beaverhead County
Victor Hager
683-4963

Big Horn County
Ken Scalzone
665-3442

Blaine County
Matthew Crampton
357-2320

Broadwater County
Kelly Morris
266-3146

Carbon County
Gregory Evertz
962-3641

Carter County
Wayne Yost
775-6355

Cascade County
Marty Metz
727-7580

Chouteau County
Dan Van Voast
622-5627

Custer County
Terry Heck
232-7905

Daniels County
Stanley French
487-5366

Dawson County
Linda Peterson-Lohse
365-5566

Deer Lodge County
Glen Green
846-1703

Fallon County
Ann Fischer
778-2217

Fergus County
Patty Creamer
538-7401

Flathead County
Angel Rosario
752-4242

Gallatin County
Gordon Hill
522-4018

Garfield County
Clarence Clayton
557-2740

Glacier County
Mark Johnson
873-4292

Golden Valley County
John Rouane Jr.
323-2103

Granite County
Annette Johnson
859-3291

Hill County
Deana Grabofsky
265-6792

Jefferson County
Julie Sacks
287-3215

Judith Basin County
Rick Caquelin
566-2311

Lake County
David Wolf
676-2841

Lewis and Clark County
Lex Riggle
449-5278

Liberty County
Dawn Wickum
759-5778

Lincoln County
Kirk Sullivan
296-2233

Madison County
Ole Berkram
842-5741

McCone County
Regan Fanning
485-2744

Meagher County
Otto Ohlson
547-3633

(over)

Mineral County
Mike Odegard
829-3395

Missoula County
Mike Odegard
829-3395

Musselshell County
John Rouane Jr.
323-2103

Park County
Ron Hoagland
222-2899

Petroleum County
Nikki Lott
429-6646

Phillips County
Lorna Philp
654-1334

Pondera County
Anthony Prince
278-3922

Powder River County
Carol Hilliard
436-2417

Powell County
Glen Green
846-1703

Prairie County
Bob Prongua
635-5381

Ravalli County
Lane Johnson
363-5010

Richland County
Jamie Selting
433-2103

Roosevelt County
Robert Bray
787-5232

Rosebud County
Rocky Schwagler
356-7333

Sanders County
Don Feist
826-3701

Sheridan County
Monica Friedrich
765-1801

Silver Bow County
Julie Sacks
287-3215

Stillwater County
Philip Sandoval
322-5359

Sweet Grass County
Chuck Roloff
932-5160

Teton County
Stacy Denny-Eneboe
466-5722

Toole County
Misty Vermulm
434-5234

Treasure County
Stewart Greer
342-5510

Valley County
Denise Wiedenheft
228-4321

Wheatland County
John Oiestad
632-5534

Wibaux County
Katrina Johnson
796-2211

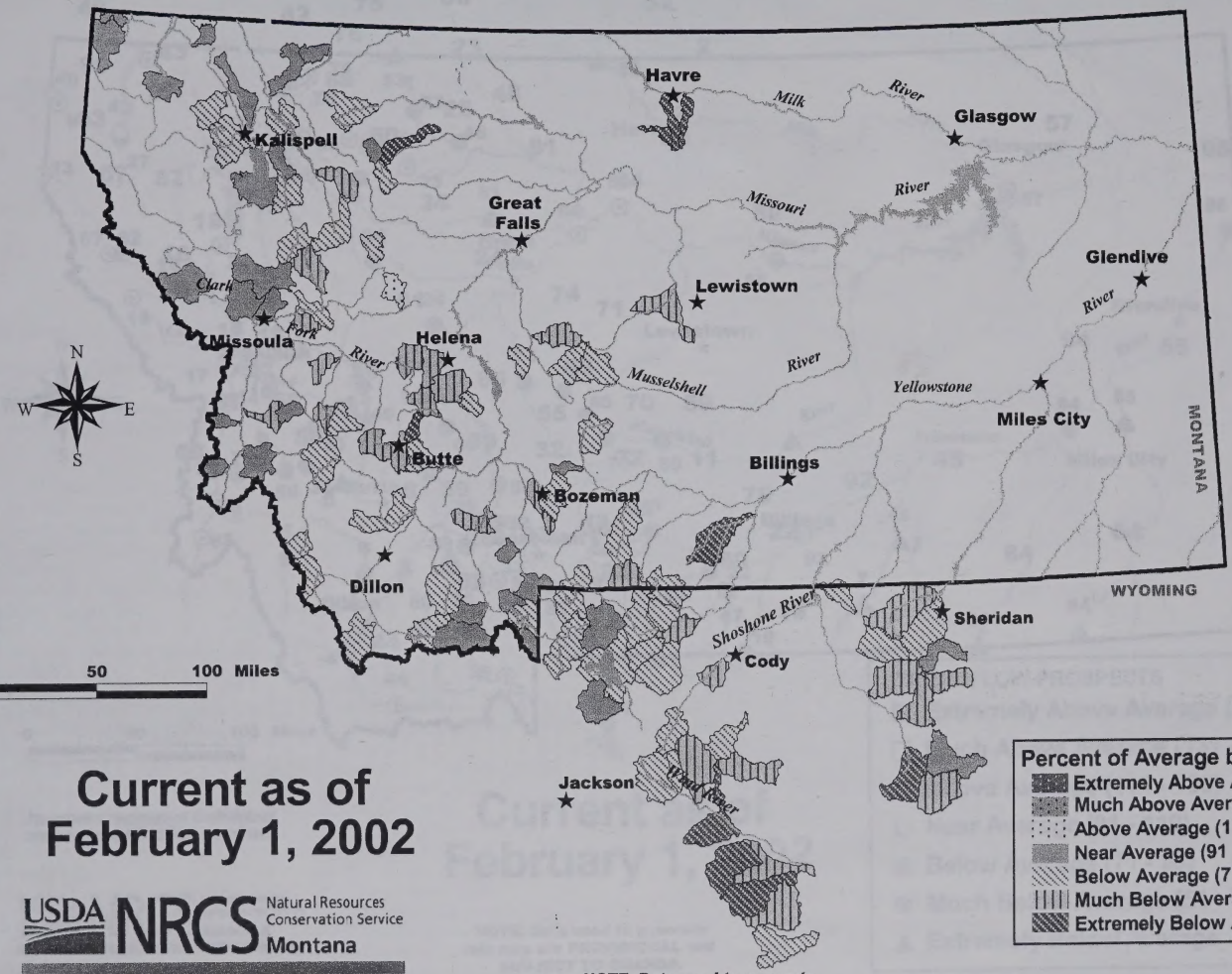
Yellowstone County
Shad Weber
657-6135

1/9/02

UNITED STATES DEPARTMENT OF AGRICULTURE

NATURAL RESOURCES CONSERVATION SERVICE

Mountain Snow Water Equivalent



Percent of Average by Sub-Basin

- Extremely Above Average (Over 150)
- Much Above Average (131 - 150)
- Above Average (111 - 130)
- Near Average (91 - 110)
- Below Average (71 - 90)
- Much Below Average (51 - 70)
- Extremely Below Average (Below 51)

Current as of February 1, 2002

USDA NRCS Natural Resources Conservation Service Montana

http://www.mt.nrcs.usda.gov

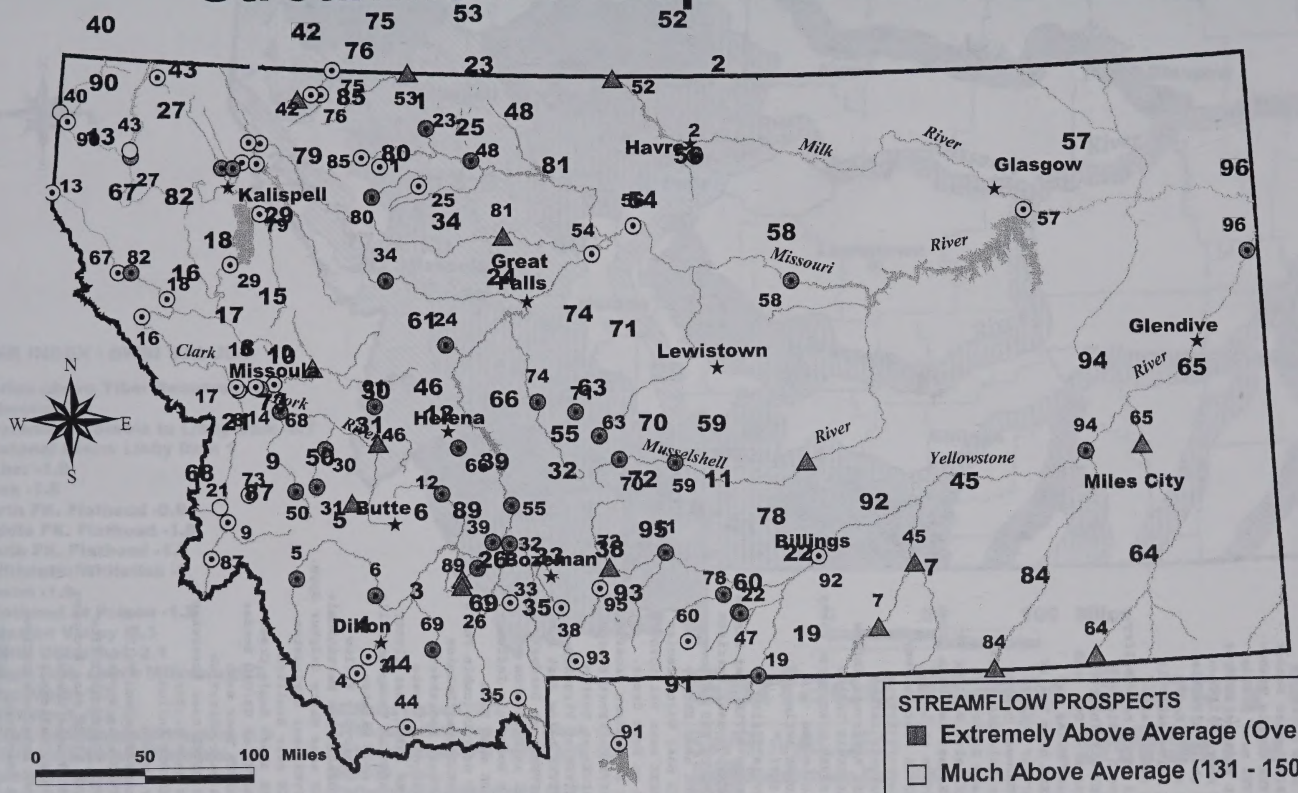
NOTE: Data used to generate this map are PROVISIONAL and SUBJECT TO CHANGE.

Montana Snow Water Equivalent

UNITED STATES DEPARTMENT OF AGRICULTURE

NATURAL RESOURCES CONSERVATION SERVICE

Streamflow Prospects for Montana



STREAMFLOW PROSPECTS

- Extremely Above Average (Over150)
- Much Above Average (131 - 150)
- Above Average (111 - 130)
- Near Average (91 - 110)
- Below Average (71 - 90)
- Much Below Average (51 - 70)
- Extremely Below Average (Below 51)

Numbers represent individual station identification numbers.

Current as of February 1, 2002

USDA NRCS Natural Resources Conservation Service Montana

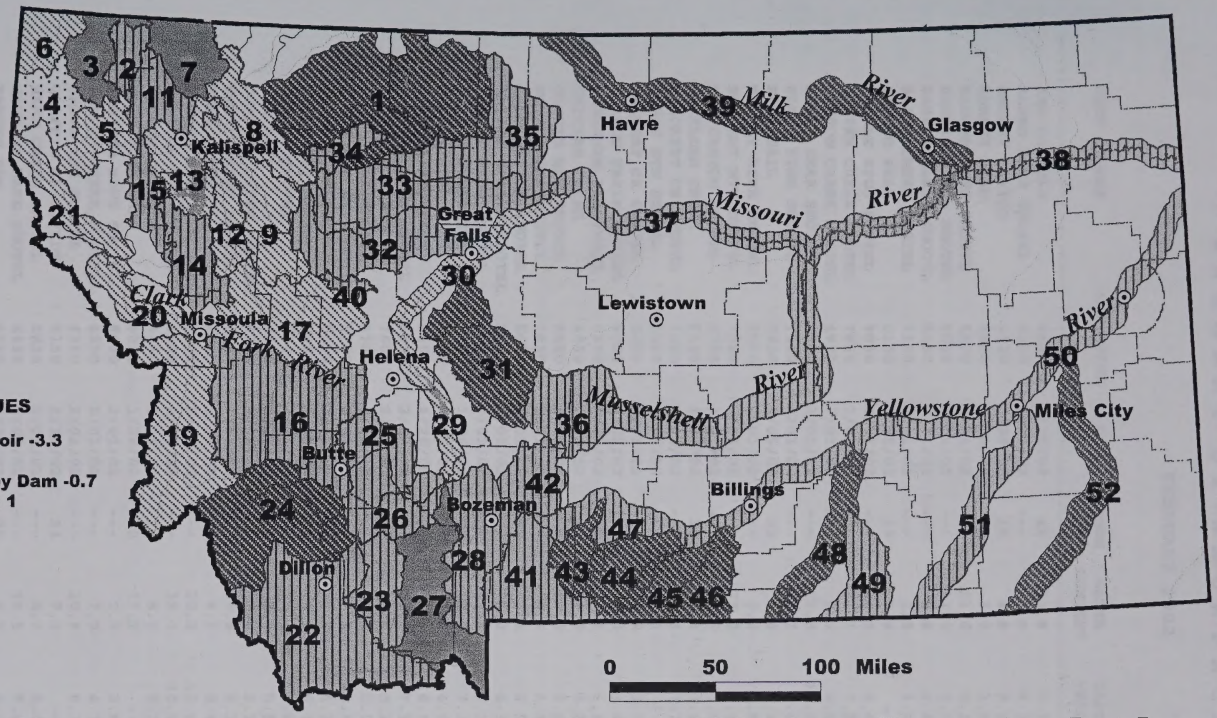
http://www.mt.nrcs.usda.gov

NOTE: Data used to generate this map are PROVISIONAL and SUBJECT TO CHANGE.

Map #	Forecast Point
1	BADGER CREEK near Browning
2	BEAVER CREEK near Havre
3	BEAVERHEAD RIVER at Barretts
4	CLARK CANYON RES Inflow
5	BIG HOLE RIVER at Wisdom
6	BIG HOLE RIVER near Melrose
7	BIGHORN RIVER near St. Xavier
8	BITTERROOT at Missoula
9	BITTERROOT near Darby
10	BLACKFOOT RIVER near Bonner
11	BOULDER RIVER at Big Timber
12	BOULDER RIVER near Boulder
13	CLARK FK at Whitehorse Rpds
14	CLARK FORK above Milltown
15	CLARK FORK above Missoula
16	CLARK FORK at St. Regis
17	CLARK FORK below Missoula
18	CLARK FORK near Plains
19	CLARKS FORK RIVER near Belfry
21	COMO RESERVOIR Inflow
22	COONEY RESERVOIR Inflow
23	CUT BANK CREEK at Cut Bank
24	DEARBORN near Criag
25	DUPUYER CREEK near Valier
26	ENNIS Reservoir Inflow
27	FISHER RIVER near Libby
28	FLATHEAD at Columbia Falls
29	FLATHEAD Lake Inflow
30	FLINT CREEK below Boulder Ck
31	FLINT CREEK near Southern Cross
32	GALLATIN RIVER at Logan
33	GALLATIN RIVER near Gateway
34	GIBSON Reservoir Inflow
35	HEBGEN Reservoir Inflow
36	HUNGRY HORSE Reservoir Inflow
38	HYALITE RESERVOIR Inflow
39	JEFFERSON RIVER near Three Forks
40	KOOTENAI at Leonia
42	LAKE SHERBURNE Inflow
43	LIBBY RES Inflow
44	LIMA RESERVOIR Inflow
45	LITTLE BIGHORN RIVER near Hardin
46	LITTLE BLACKFOOT near Garrison
47	LOWER WILLOW CK RES Inflow
48	MARIAS RIVER near Shelby
49	MF FLATHEAD near West Glacier
50	MF ROCK CREEK near Philipsburg
52	MILK RIVER at East Cross.
53	MILK RIVER at Western Crossing
54	MISSOURI RIVER at Fort Benton
55	MISSOURI RIVER at Toston
56	MISSOURI RIVER at Virgelle
57	MISSOURI RIVER below Fort Peck
58	MISSOURI RIVER near Landusky
59	MUSSELSHELL at Harlowton
60	MYSTIC LAKE Reservoir Inflow
61	NEVADA CREEK near Finn
62	NF FLATHEAD near Columbia Falls
63	NF MUSSELSHELL near Delpine
64	POWDER RIVER at Moorehead
65	POWDER RIVER near Locate
66	PRICKLY PEAR CREEK near Clancy
67	PROSPECT CREEK at Thompson Falls
68	ROCK CREEK near Clinton
69	RUBY RIVER Reservoir Inflow
70	SF MUSSELSHELL above Martinsdale
71	SHEEP CREEK near White Sulphur Spgs.
72	SHIELDS RIVER near Livingston
73	SKALKAHO CK near Hamilton
74	SMITH RIVER above Eagle Creek
75	ST. MARY RIVER at US/CAN Border
76	ST. MARY RIVER near Babb
77	STILLWATER near Whitefish
78	STILLWATER RIVER near Absarokee
79	SWAN RIVER near Bigfork
80	SWIFT RESERVOIR Inflow
81	TETON near Dutton
82	THOMPSON near Thompson Falls
83	TOBACCO RIVER near Eureka
84	TONGUE RIVER RESERVOIR Inflow
85	TWO MEDICINE RIVER near Browning
87	WF BITTERROOT near Conner
88	WHITEFISH near Kalispell
89	WILLOW CREEK Reservoir Inflow
90	YAAK RIVER near Troy
91	YELLOWSTONE at Lake Outlet
92	YELLOWSTONE RIVER at Billings
93	YELLOWSTONE RIVER at Corwin Spgs
94	YELLOWSTONE RIVER at Miles City
95	YELLOWSTONE RIVER near Livingston
96	YELLOWSTONE RIVER near Sidney

UNITED STATES DEPARTMENT OF AGRICULTURE

NATURAL RESOURCES CONSERVATION SERVICE



RIVER INDEX \ SWSI VALUES

1 Marias above Tiber Reservoir -3.3
2 Tobacco -2.3
3 Kootenai Ft. Steele to Libby Dam -0.7
4 Kootenai below Libby Dam 1
5 Fisher -1.9
6 Yaak -1.5
7 North FK. Flathead -0.9
8 Middle FK. Flathead -1.9
9 South FK. Flathead -1.5
11 Stillwater/Whitefish -2
12 Swan -1.9
13 Flathead at Polson -1.2
14 Mission Valley -2.3
15 Little Bitterroot -2.1
16 Clark Fork above Milltown -2.7
17 Blackfoot -1.7
19 Bitterroot -1.3
20 Clark Fork below Bitterroot -1.9
21 Clark Fork below Flathead -1.4
22 Beaverhead -2.9
23 Ruby -2.2
24 Big Hole -3.1
25 Boulder (Jefferson) -2.5
26 Jefferson -2.9
27 Madison 0.2
28 Gallatin -2.1
29 Missouri above Canyon Ferry -1.7
30 Missouri below Canyon Ferry -1.9
31 Smith -3
32 Sun -2.8
33 Teton -2.7
34 Birch/Dupuyer Creeks -2.9
35 Marias -2.4
36 Musselshell -2.7
37 Missouri above Fort Peck -2.1
38 Missouri below Fort Peck -2.2
39 Milk -3.3
40 Dearborn near Craig -2.7
41 Yellowstone above Livingston -2
42 Shields -2.7
43 Boulder (Yellowstone) -3.1
44 Stillwater -3.5
45 Rock/Red Lodge Creeks -3.1
46 Clarks Fork -3.2
47 Yellowstone above Bighorn -2.5
48 Bighorn below Bighorn Lake -3.3
49 Little Bighorn -2.5
50 Yellowstone below Bighorn -2.9
51 Tongue -2.8
52 Powder -3.7

Surface Water Supply Index (SWSI) Values

Current as of February 1, 2002

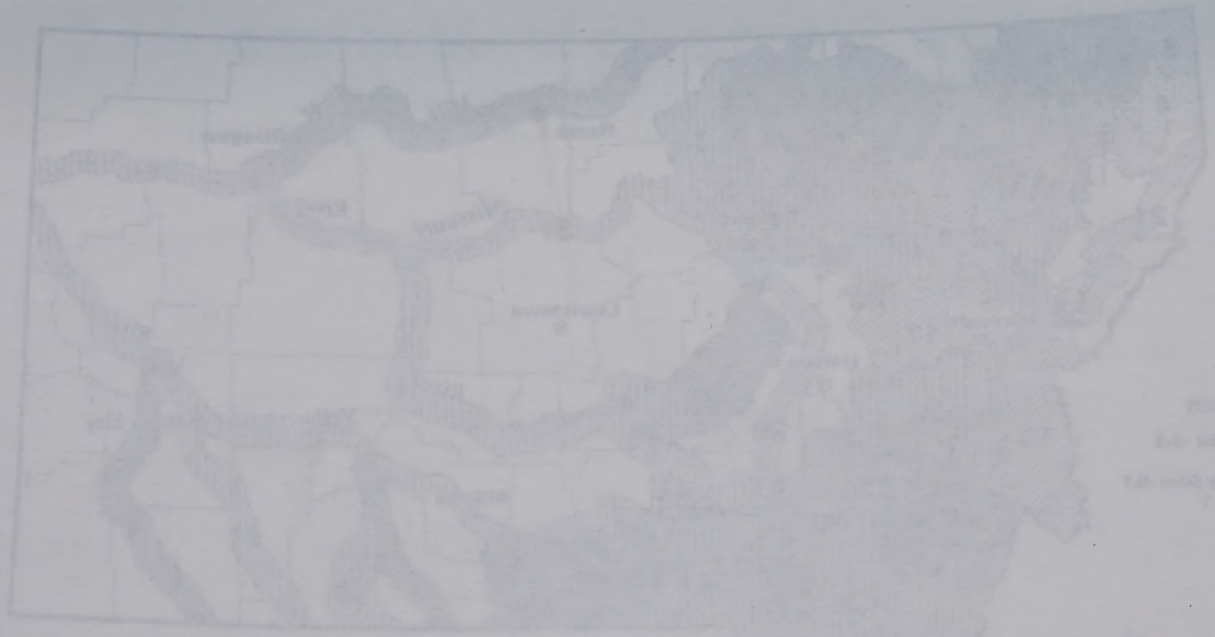
SWSI VALUES

- Extremely Dry -4.0 to -3.0
- Moderately Dry -2.9 to -2.0
- Slightly Dry -1.9 to -1.0
- Near Average -0.9 to 0.9
- Sightly Wet 1.0 to 1.9
- Moderately Wet 2.0 to 2.9
- Extremely Wet 3.0 to 4.0
- SWSI Not Applicable

NOTE: Data used to generate this map are PROVISIONAL and SUBJECT TO CHANGE.

UDSA NRCS Natural Resources Conservation Service Montana

http://www.mt.nrcs.usda.gov



SUMMARY OF SNOWPACK DATA

FEBRUARY 2002

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
ABE LINCOLN	4440	1/29/02	49	13.8	7.7	13.7
ALBRO LAKE SNOTEL	8300	2/01/02	---	8.8	7.3	--
ASHLEY DIVIDE	4820	1/29/02	18	4.9	3.4	5.1
ASHLEY LAKE	4000	1/29/02	14	3.0	2.8	4.4
BADGER PASS SNOTEL	6900	2/01/02	---	21.6	9.1	22.3
BANFIELD MTN SNOTEL	5600	2/01/02	---	14.0	7.1	13.3
BARKER LAKES SNOTEL	8250	2/01/02	---	5.8	6.8	9.2
BASIN CREEK SNOTEL	7180	2/01/02	---	3.5	4.6	4.9
BASSOO PEAK	5150	1/31/02	33	7.8	--	--
BEAGLE SPGS SNOTEL	8850	2/01/02	---	4.3	5.6	5.5
BEAVER CREEK SNOTEL	7850	2/01/02	---	11.7	7.9	11.5
BISSON CREEK SNOTEL	4920	2/01/02	---	6.5	4.5	6.8
BLACK BEAR SNOTEL	7950	2/01/02	---	27.3	14.3	25.6
BLACK PINE SNOTEL	7100	2/01/02	---	4.7	5.0	8.0
BLACKTAIL	5650	2/05/02	35	9.4	5.4	9.6
BLOODY DICK SNOTEL	7550	2/01/02	---	6.0	4.0	8.4
BOULDER MTN SNOTEL	7950	2/01/02	---	13.0	6.6	13.4
BOX CANYON SNOTEL	6700	2/01/02	---	4.7	3.9	6.7
BOXELDER CREEK	5100	1/31/02	10	1.1	3.6	5.2
BRACKETT CR SNOTEL	7320	2/01/02	---	13.4	7.7	13.3
BURNT MTN SNOTEL	5880	2/01/02	---	1.8	--	--
CALVERT CR SNOTEL	6430	2/01/02	---	4.9	2.8	5.9
CARROT BASIN SNOTEL	9000	2/01/02	---	17.0	11.4	18.1
CHESSMAN RESERVOIR	6200	1/29/02	4	.6	1.8	2.5
CHICKEN CREEK	4060	1/29/02	48	10.6	5.8	11.5
CLOVER MDW SNOTEL	8800	2/01/02	---	10.5	9.6	11.1
COLE CREEK SNOTEL	7850	2/01/02	---	3.2	4.9	9.8
COMBINATION SNOTEL	5600	2/01/02	---	2.1	2.5	3.4
COPPER BOTTOM SNOTEL	5200	2/01/02	---	8.3	4.0	8.0
COPPER CAMP SNOTEL	6950	2/01/02	---	24.6	8.1	21.3
COPPER MOUNTAIN	7700	1/26/02	25	5.8	7.3	7.0
COYOTE HILL	4200	2/01/02	23	5.0	4.0	7.3
CREVICE MOUNTAIN	8400	1/28/02	31	6.4	4.9	7.6
CRYSTAL LAKE SNOTEL	6050	2/01/02	---	5.4	7.5	8.1
DAISY PEAK SNOTEL	7600	2/01/02	---	5.9	3.2	6.7
DALY CREEK SNOTEL	5780	2/01/02	---	5.1	5.0	7.4
DARKHORSE LK. SNOTEL	8700	2/01/02	---	17.6	11.0	20.4
DEADMAN CR SNOTEL	6450	2/01/02	---	4.8	4.2	7.1
DISCOVERY BASIN	7050	1/30/02	22	4.4	6.3	6.6
DIVIDE SNOTEL	7800	2/01/02	---	5.3	8.0	6.9
DIX HILL	6400	1/27/02	22	5.0	5.9	7.6
DUPUYER CREEK SNOTEL	5750	2/01/02	---	2.4	3.1	7.3
EMERY CREEK SNOTEL	4350	2/01/02	---	8.6	5.1	10.5
FISH CREEK	8000	1/29/02	20	4.0	5.6	--
FISHER CREEK SNOTEL	9100	2/01/02	---	20.2	11.4	23.8
FLATTOP MTN SNOTEL	6300	2/01/02	---	33.1	14.0	31.8
FOURTH OF JULY	3450	1/29/02	25	6.1	5.1	6.5
FRED BURR PASS	8000	1/28/02	50	13.7	--	--
FROHNER MDWS SNOTEL	6480	2/01/02	---	2.7	3.6	5.0
GARVER CREEK SNOTEL	4250	2/01/02	---	7.5	4.1	7.3
GRAVE CRK SNOTEL	4300	2/01/02	---	10.8	6.3	11.7
GRIFFIN CR DIVIDE	5150	1/31/02	31	7.2	--	--
HAND CREEK SNOTEL	5030	2/01/02	---	6.7	4.0	8.6
HAWKINS LAKE SNOTEL	6450	2/01/02	---	19.5	7.9	18.4
HEBGEN DAM	6550	1/30/02	28	6.7	4.1	8.2
HELL ROARING DIVIDE	5770	1/31/02	75	20.2	7.4	20.7
HERRIG JUNCTION	4850	1/29/02	68	19.9	7.6	18.1
HOLBROOK	4530	1/28/02	28	6.5	3.0	7.2
HOODOO BASIN SNOTEL	6050	2/01/02	---	32.9	12.5	30.1
INTERGAARD	6450	1/25/02	9	2.0	3.6	4.8
JOHNSON PARK	6450	1/30/02	21	3.0	2.3	3.9
KRAFT CREEK SNOTEL	4750	2/01/02	---	8.7	6.3	10.9
LAKEVIEW RDG. SNOTEL	7400	2/01/02	---	7.3	4.3	7.2
LEMHI RIDGE SNOTEL	8100	2/01/02	---	4.9	6.2	6.9
LICK CREEK SNOTEL	6860	2/01/02	---	3.3	5.3	7.4
LONE MOUNTAIN SNOTEL	8880	2/01/02	---	11.0	9.2	12.1
LOWER TWIN SNOTEL	7900	2/01/02	---	7.8	7.2	12.0
LUBRECHT SNOTEL	4680	2/01/02	---	3.5	3.3	4.2
LUBRECHT FOREST NO 3	5450	1/30/02	18	3.0	2.8	4.6
LUBRECHT FOREST NO 4	4650	1/30/02	9	1.3	1.9	2.5
LUBRECHT FOREST NO 6	4040	1/30/02	12	2.0	2.2	2.8
LUBRECHT HYDROPLOT	4200	1/30/02	19	3.1	3.1	4.2
MADISON PLT SNOTEL	7750	2/01/02	---	14.9	8.0	16.2

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
MANY GLACIER SNOTEL	4900	2/01/02	---	12.0	5.2	11.2
MARIAS PASS	5250	1/31/02	40	10.6	6.7	11.7
MONUMENT PK SNOTEL	8850	2/01/02	---	13.6	8.5	14.2
MOSS PEAK SNOTEL	6780	2/01/02	---	22.0	14.1	24.6
MOULTON RESERVOIR	6850	1/29/02	17	3.0	3.7	5.2
MT LOCKHART SNOTEL	6400	2/01/02	---	11.6	6.7	14.2
MULE CREEK SNOTEL	8300	2/01/02	---	8.8	7.1	10.4
N.E. ENTRANCE SNOTEL	7350	2/01/02	---	4.6	3.3	7.7
NEVADA RIDGE SNOTEL	7020	2/01/02	---	7.8	6.1	--
NEW WORLD	6900	1/30/02	30	6.8	8.0	9.0
NEWTON MOUNTAIN	5600	1/28/02	76	24.0	10.3	22.6
NEZ PERCE CMP SNOTEL	5650	2/01/02	---	9.3	5.7	9.9
NEZ PERCE CREEK	6600	1/26/02	8	2.1	4.0	4.3
N.F. ELK CR SNOTEL	6250	2/01/02	---	6.4	5.2	8.0
NF JOCKO SNOTEL	6330	2/01/02	---	33.1	14.0	30.1
NOISY BASIN SNOTEL	6040	2/01/02	---	26.9	11.3	27.0
OPHIR PARK	7150	1/27/02	29	7.0	6.5	10.6
PETERSON MDW SNOTEL	7200	2/01/02	---	3.1	5.6	6.1
PICKFOOT CRK SNOTEL	6650	2/01/02	---	5.3	4.1	7.9
PIKE CREEK SNOTEL	5930	2/01/02	---	15.0	6.7	17.8
PIPESTONE PASS	7200	1/27/02	13	2.0	2.9	3.2
PLACER BASIN SNOTEL	8830	2/01/02	---	9.0	6.2	11.7
POORMAN CR SNOTEL	5100	2/01/02	---	28.8	11.9	21.5
PORCUPINE SNOTEL	6500	2/01/02	---	3.4	3.8	4.5
RED TOP	5260	1/28/02	64	18.7	9.2	18.4
ROCKER PEAK SNOTEL	8000	2/01/02	---	6.1	7.9	9.1
ROCKY BOY SNOTEL	4700	2/01/02	---	1.6	3.0	3.7
SACAJAWEA SNOTEL	6550	2/01/02	---	8.8	6.5	--
SADDLE MTN SNOTEL	7900	2/01/02	---	15.8	8.9	17.3
S.F. SHIELDS SNOTEL	8100	2/01/02	---	7.7	7.4	10.7
SHORT CREEK SNOTEL	7000	2/01/02	---	2.8	3.0	3.9
SHOWER FALLS SNOTEL	8100	2/01/02	---	11.2	10.1	14.0
SKALKAHO SNOTEL	7260	2/01/02	---	15.0	8.8	16.0
SLEEPING WOMAN SNTL	6150	2/01/02	---	9.3	5.9	10.6
SPOTTED BEAR MTN.	7000	1/28/02	31	7.1	5.2	10.1
SPUR PARK SNOTEL	8100	2/01/02	---	11.7	8.3	14.6
STAHL PEAK SNOTEL	6030	2/01/02	---	26.4	10.3	24.1
STORM LAKE	7780	1/30/02	24	5.2	7.5	8.3
STRYKER BASIN	6180	1/29/02	80	25.0	9.4	21.3
STUART MOUNTAIN SNTL	7400	2/01/02	---	22.7	13.5	22.8
SUCKER CREEK	3960	1/31/02	3	.4	.6	.5
TAYLOR ROAD	4080	1/31/02	4	.4	2.4	2.6
TEN MILE LOWER	6600	1/29/02	14	2.4	3.2	4.7
TEN MILE MIDDLE	6800	1/29/02	19	4.5	5.0	7.1
TEPEE CREEK SNOTEL	8000	2/01/02	---	9.0	6.7	8.5
TIZER BASIN SNOTEL	6840	2/01/02	---	4.8	5.7	6.5
TRINKUS LAKE	6100	1/28/02	80	24.6	18.9	26.6
TRUMAN CREEK	4060	1/29/02	13	2.9	3.2	3.5
TV MOUNTAIN	6800	1/28/02	42	11.1	8.3	12.0
TWELVEMILE SNOTEL	5600	2/01/02	---	12.0	6.9	12.8
TWENTY-ONE MILE	7150	1/31/02	40	10.1	5.4	11.1
TWIN LAKES SNOTEL	6400	2/01/02	---	29.5	13.3	27.5
UPPER HOLLAND LAKE	6200	1/28/02	80	21.6	15.0	23.7
WALDRON SNOTEL	5600	2/01/02	---	4.9	3.8	8.0
WARM SPRINGS SNOTEL	7800	2/01/02	---	11.6	9.9	13.8
WEASEL DIVIDE	5450	1/30/02	78	24.0	9.2	21.5
WEST YELL'ST SNOTEL	6700	2/01/02	---	7.1	3.2	8.6
WHISKEY CREEK SNOTEL	6800	2/01/02	---	10.5	4.5	11.1
WHITE MILL SNOTEL	8700	2/01/02	---	13.2	7.5	16.1
WOOD CREEK SNOTEL	5960	2/01/02	---	5.2	3.3	6.3

Montana Water Supply Outlook Report as of February 1, 2002

Montana had several storms move across areas of the state during January adding much needed mountain snow. January mountain precipitation was much improved over what we received during December. The most noteable storms for areas of central and northcentral Montana occurred during the third week of January where there were significant mountain snowpack gains. January average temperature departures state-wide were generally 5 to 10 degrees above normal with southwest Montana generally 2 to 5 degrees above normal and the eastern third of Montana generally 8 to 10 degrees above normal.

Snowpack

Mountain snowpack statewide was 90 percent of average and 161 percent of last year. West of the Continental Divide, snowpack was 97 percent of average and 181 percent of last year and East of the continental Divide, snowpack was 79 percent of average and 135 percent of last year.

Areas where the current snowpack is below last year west of the divide are Flint Creek and Rock Creek Basins and east of the divide are the Ruby, Boulder(Jefferson Basin), Hyalite, west-side Headwaters Missouri Mainstem, Milk, Big Snowy Mountains, west-side Crazy Mountains, and Red Lodge/Rock Creek Basins.

RIVER BASIN	% OF AVERAGE	% OF LAST YEAR
COLUMBIA	97	181
KOOTENAI	112	235
FLATHEAD	97	193
UPPER CLARK FORK	82	128
BITTERROOT	94	181
LOWER CLARK FORK	109	203
MISSOURI	80	126
MISSOURI HEADWATERS	84	128
JEFFERSON	79	111
MADISON	92	157
GALLATIN	87	130
MISSOURI MAINSTEM	70	111
HEADWATERS MAINSTEM	71	105
SMITH-JUDITH-MUSSELSHELL	80	131
SUN-TETON-MARIAS	81	181
MILK	25	28
BEARPAW MOUNTAINS	29	36
CYPRESS HILLS, CANADA	20	22
ST. MARY	105	235
ST. MARY & MILK	73	121
YELLOWSTONE	76	142
UPPER YELLOWSTONE	80	153
LOWER YELLOWSTONE (WYOMING)	73	136
WIND	71	147
SHOSHONE	75	171
BIGHORN	74	141
TONGUE	74	110
POWDER	73	108

Precipitation

January mountain and valley precipitation across the state was 104 percent of average and 315 percent of last year, while the water year precipitation was 94 percent of average and 149 percent of last year.

West of the Continental Divide, January mountain and valley precipitation was 117 percent of average and 342 percent of last year and the water year precipitation was 107 percent of average and 196 percent of last year. East of the Divide, January mountain and valley precipitation was 91 percent of average and 284 percent of last year and the water year precipitation was 82 percent of average and 115 percent of last year.

RIVER BASIN	JANUARY % OF AVERAGE	WATER YEAR % OF AVERAGE
COLUMBIA	117	107
KOOTENAI	134	118
FLATHEAD	128	110
UPPER CLARK FORK	96	95
BITTERROOT	101	104
LOWER CLARK FORK	119	113
MISSOURI	89	82
JEFFERSON	82	89
MADISON	82	101
GALLATIN	83	93
MISSOURI MAINSTEM	73	67
SMITH-JUDITH-MUSSELSHELL	99	72
SUN-TETON-MARIAS	111	78
MILK	84	50
ST. MARY	140	103
YELLOWSTONE	85	81
UPPER YELLOWSTONE	90	86
LOWER YELLOWSTONE (WYOMING)	81	80
WIND	81	72
SHOSHONE	93	83
BIGHORN	62	80
TONGUE	84	91
POWDER	80	84

Reservoirs

Major reservoir storages statewide were 91 percent of average and 95 percent of last year. Reservoir storage west of the Continental Divide was 120 percent of average and 102 percent of last year. East of the Continental Divide, reservoir storages were 82 percent of average and 92 percent of last year.

RIVER BASIN	% OF AVERAGE	% OF LAST YEAR
COLUMBIA	120	102
KOOTENAI	130	88
FLATHEAD	115	117
UPPER CLARK FORK	89	115
BITTERROOT	93	91
LOWER CLARK FORK	103	106
MISSOURI	82	93
JEFFERSON	51	69
MADISON	106	96
GALLATIN	151	98
MISSOURI MAINSTEM	82	93
SMITH-JUDITH-MUSSELSHELL	24	61
SUN-TETON-MARIAS	91	94
MILK	23	62
ST. MARY	69	158
YELLOWSTONE	82	81
UPPER YELLOWSTONE	96	88
LOWER YELLOWSTONE	82	80

Streamflow

Assuming normal precipitation across Montana, streamflows are forecast to average between 59 to 69 percent. West of the Continental Divide, streamflows are forecast to average between 65 and 76 percent. East of the Continental Divide, streamflows are forecast to average between 49 and 60 percent.

Below are averaged river basin streamflow forecast summaries for the period April 1 through July 31. THESE FORECASTS ASSUME NEAR NORMAL SPRING CONDITIONS AND DO NOT ACCOUNT FOR WELL BELOW AVERAGE (70% or less) OR WELL ABOVE AVERAGE (130% or more) SNOWMELT OR SPRING RAIN. Specific forecast probabilities are available in each individual River Basin Report.

RIVER BASIN	April-July THIS YEAR % OF AVERAGE	April-July LAST YEAR % OF AVERAGE
COLUMBIA	65 to 76	49 to 56
KOOTENAI	73 to 82	46 to 51
FLATHEAD	67 to 77	48 to 52
UPPER CLARK FORK	46 to 61	54 to 65
BITTERROOT	73 to 84	56 to 63
LOWER CLARK FORK	66 to 77	43 to 51
MISSOURI	50 to 63	52 to 63
JEFFERSON	50 to 65	56 to 71
MADISON	74 to 81	67 to 75
GALLATIN	59 to 71	66 to 77
MISSOURI MAINSTEM	55 to 70	49 to 61
SMITH-JUDITH-MUSSELSHELL	42 to 53	39 to 48
SUN-TETON-MARIAS	48 to 66	37 to 45
MILK	26 to 37	26 to 37
ST. MARY	70 to 77	57 to 61
YELLOWSTONE	47 to 57	49 to 59
UPPER YELLOWSTONE	60 to 69	54 to 64
LOWER YELLOWSTONE	35 to 46	44 to 54

NOTE: The APRIL-JULY LAST YEAR % OF AVERAGE column above is what was forecast last year, NOT what actually occurred.

Surface Water Supply Index

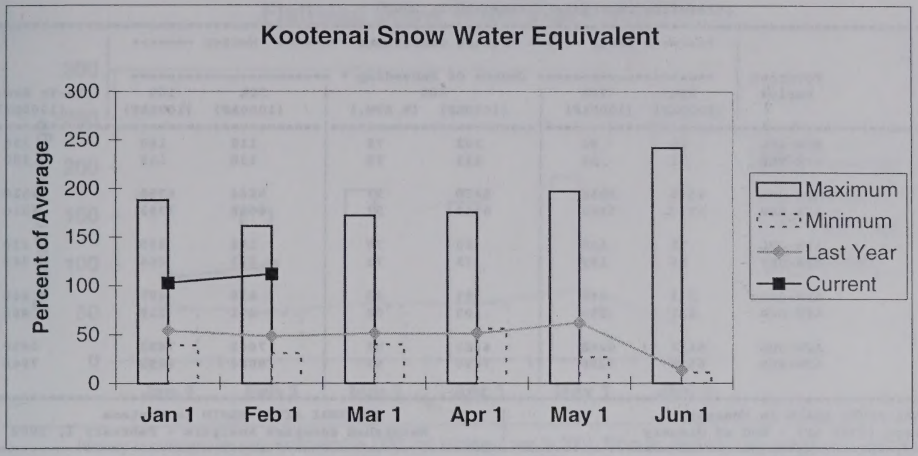
The Surface Water Supply Index (SWSI) is a measure of available surface water availability for the spring and summer months. Water users that rely on mountain precipitation can use the index to evaluate seasonal surface water supplies. The SWSI accounts for mountain snowpack, mountain precipitation, streamflow, reservoir storage, and soil moisture.

SWSI RATING	SURFACE WATER CONDITION
+3.0 to +4.0	Extremely Wet
+2.0 to +3.0	Moderately Wet
+1.0 to +2.0	Slightly Wet
-1.0 to +1.0	Near Average
-1.0 to -2.0	Slightly Dry
-2.0 to -3.0	Moderately Dry
-3.0 to -4.0	Extremely Dry

SWSI	Basin
-2.3	Tobacco River
-0.7	Kootenai Ft. Steele to Libby Dam
+1.0	Kootenai River below Libby Dam
-1.9	Fisher River
-1.5	Yaak River
-0.9	North Fork Flathead River
-1.9	Middle FORK Flathead River
-1.5	South Fork Flathead River
-1.4	Flathead River at Columbia Falls
-2.0	Stillwater/Whitefish Rivers
-1.9	Swan River
-1.2	Flathead River at Polson
-2.3	Mission Valley
-2.1	Little Bitterroot River
-2.7	Clark Fork River above Milltown
-1.7	Blackfoot River
-1.3	Bitterroot River
-1.9	Clark Fork River below Bitterroot River
-1.4	Clark Fork River below Flathead River
-2.9	Beaverhead River
-2.2	Ruby River
-3.1	Big Hole River
-2.5	Boulder River (Jefferson)
-2.9	Jefferson River
+0.2	Madison River
-2.1	Gallatin River
-1.7	Missouri River above Canyon Ferry
-1.9	Missouri River below Canyon Ferry
-3.0	Smith River
-2.8	Sun River
-2.7	Teton River
-2.9	Birch/Dupuyer Creeks
-3.3	Marias River above Tiber
-2.4	Marias River below Tiber
-2.7	Musselshell River
-2.1	Missouri River above Ft. Peck
-2.2	Missouri River below Ft. Peck
-3.3	Milk River
-2.7	Dearborn River near Craig
-2.0	Yellowstone River above Livingston
-2.7	Shields River
-3.1	Boulder River (Yellowstone)
-3.5	Stillwater River
-3.1	Rock/Red Lodge Creeks
-3.2	Clarks Fork River
-2.5	Yellowstone River above Bighorn River
-3.3	Bighorn River below Bighorn Lake
-2.5	Little Bighorn River
-2.9	Yellowstone River below Bighorn River
-2.8	Tongue River
-3.7	Powder River

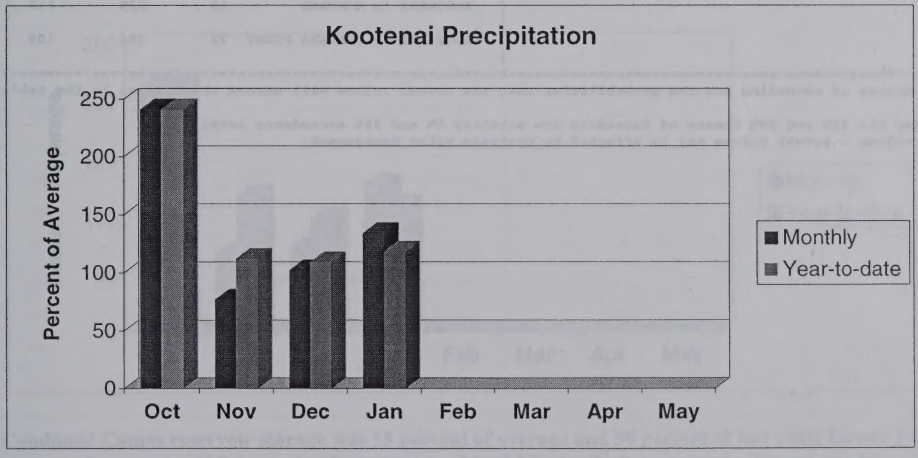
Kootenai River Basin in Montana

Snowpack conditions in the Kootenai River Basin were above average. Snow water content was 112 percent of average and 235 percent of last year. Snow water content in the Kootenay in Canada was 100 percent of average and 221 percent of last year.



January maximum swe was established in 1997 and minimum was in 1977; February maximum swe was in 1997 and minimum swe was in 1977; March maximum swe was in 1972 and minimum swe was in 1977; April maximum swe was in 1974 and minimum swe was in 2001; May maximum swe was in 1974 and minimum swe was in 1977; and June maximum swe was in 1974 and minimum swe was in 1992. Average is for the period 1971 through 2000.

Mountain precipitation during January was 136 percent of average and 539 percent of last year. Valley precipitation during January was 106 percent of average and 279 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2001, was 118 percent of average and 296 percent of last year.



Lake Koocanusa storage was 130 percent of average and 88 percent of last year.

Surface Water Supply Index (SWSI) was -2.3 in the Tobacco River; -0.7 in the Kootenai Ft. Steele to Libby Dam; +1.0 in the Kootenai River below Libby Dam; -1.9 in the Fisher River; and -1.5 in the Yaak River.

KOOTENAI RIVER BASIN in Montana
Streamflow Forecasts - February 1, 2002

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
TOBACCO RIVER nr Eureka	APR-JUL	64	86	102	75	118	140	136
	APR-SEP	71	96	113	75	130	155	150
LIBBY RES Inflow (1,2)	APR-JUL	4345	5036	5350	97	5664	6355	5510
	APR-SEP	5217	5962	6300	97	6638	7383	6510
FISHER RIVER nr Libby	APR-JUL	75	126	160	70	194	245	230
	APR-SEP	86	139	175	71	211	264	245
YAAK RIVER nr Troy	APR-JUL	273	340	385	88	430	497	440
	APR-SEP	291	359	405	88	451	519	460
KOOTENAI at Leonia (1,2)	APR-JUL	5417	6268	6655	97	7042	7893	6850
	APR-SEP	6428	7296	7690	97	8084	8952	7940

KOOTENAI RIVER BASIN in Montana
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
LAKE KOOCANUSA	5748.0	3127.0	3562.0	2400.9

KOOTENAI RIVER BASIN in Montana
Watershed Snowpack Analysis - February 1, 2002

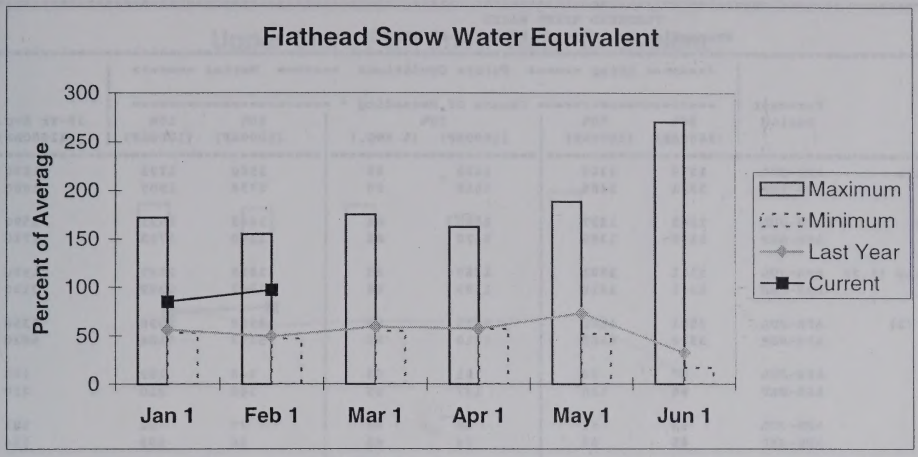
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
KOOTENAY in CANADA	20	213	100
KOOTENAI MAINTSTEM	3	283	131
TOBACCO	3	237	107
FISHER	2	175	92
YAAK	5	207	104
KOOTENAI in MONTANA	13	235	112
KOOTENAI ab BONNERS FERRY	33	224	106

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

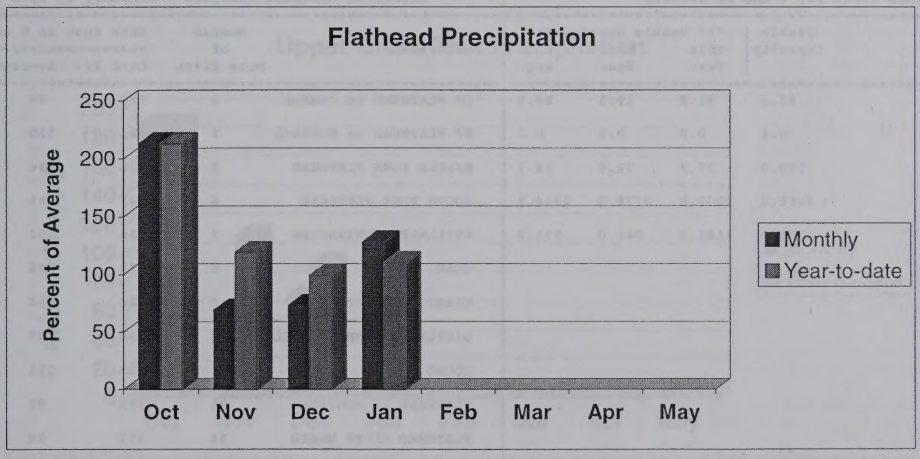
Flathead River Basin

Snowpack conditions in the Flathead River Basin were near average. Snow water content was 97 percent of average and 193 percent of last year.



January maximum swe was established in 1997 and minimum was in 2001; February maximum swe was in 1972 and minimum was in 2001; March maximum swe was in 1972 and minimum was in 2001; April maximum swe was in 1972 and minimum was in 2001; May maximum swe was in 1972 and minimum was in 1992; and June maximum swe was in 1974 and minimum was in 1992. Average is for the period 1971 through 2000.

Mountain precipitation during January was 130 percent of average and 354 percent of last year. Valley precipitation during January was 54 percent of average and 93 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2001, was 110 percent of average and 226 percent of last year.



Combined Camas reservoir storage was 55 percent of average and 58 percent of last year; Lower Jocko Lake was 0 percent of average and 0 percent of last year; combined Mission Valley reservoir storage was 80 percent of average and 86 percent of last year; Hungry Horse storage was 113 percent of average and 106 percent of last year; and Flathead Lake storage was 122 percent of average and 158 percent of last year.

Surface Water Supply Index (SWSI) was -0.9 in the North Fork Flathead River; -1.9 in the Middle Fork Flathead River; -1.5 in the South Fork Flathead River; -1.4 in the Flathead River at Columbia Falls; -2.0 in the Stillwater/Whitefish Rivers; -1.9 in the Swan River; -1.2 in the Flathead River at Polson; -2.3 in the Mission Valley; and -2.1 in the Little Bitterroot River.

FLATHEAD RIVER BASIN
Streamflow Forecasts - February 1, 2002

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
NF FLATHEAD nr Columbia Falls	APR-JUL	1179	1340	1450	89	1560	1721	1630
	APR-SEP	1321	1496	1615	90	1734	1909	1800
MF FLATHEAD nr West Glacier	APR-JUL	1085	1237	1340	84	1443	1595	1590
	APR-SEP	1198	1360	1470	85	1580	1742	1740
HUNGRY HORSE Reservoir Inflow (1,2)	APR-JUL	1151	1501	1660	83	1819	2169	1990
	APR-SEP	1261	1618	1780	84	1942	2299	2120
FLATHEAD at Columbia Falls (2)	APR-JUL	3551	4161	4575	86	4989	5599	5350
	APR-SEP	3916	4567	5010	86	5453	6104	5820
STILLWATER nr Whitefish	APR-JUL	53	94	121	63	148	189	192
	APR-SEP	64	108	137	65	166	210	210
WHITEFISH nr Kalispell	APR-JUL	42	57	67	66	77	92	101
	APR-SEP	45	62	74	65	86	103	114
ASHLEY CREEK nr Marion	APR-JUL	0.76	2.99	4.50	63	6.90	10.44	7.19
	APR-SEP	0.57	2.91	4.50	67	6.87	10.37	6.72
SWAN RIVER nr Bigfork	APR-JUL	344	422	474	84	526	604	565
	APR-SEP	392	480	540	84	600	688	645
FLATHEAD Lake Inflow (1,2)	APR-JUL	4071	4916	5300	86	5684	6529	6200
	APR-SEP	4451	5368	5785	86	6202	7119	6710

FLATHEAD RIVER BASIN
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
CAMAS (4)	45.2	11.2	19.3	20.3
LOWER JOCKO LAKE	6.4	0.0	0.0	0.1
MISSION VALLEY (8)	100.0	27.9	32.6	34.7
HUNGRY HORSE	3451.0	2503.0	2370.0	2214.7
FLATHEAD LAKE	1791.0	1181.0	748.0	971.2

FLATHEAD RIVER BASIN
Watershed Snowpack Analysis - February 1, 2002

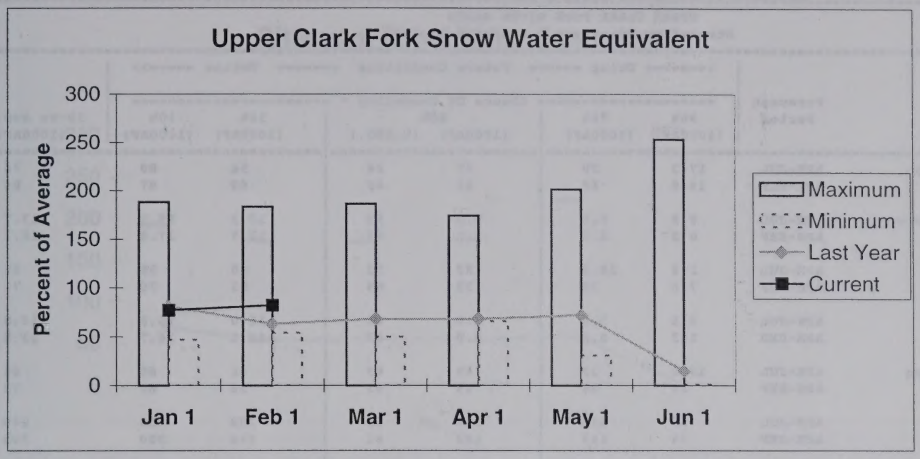
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
NF FLATHEAD in CANADA	4	170	86
NF FLATHEAD in MONTANA	7	244	105
MIDDLE FORK FLATHEAD	5	214	94
SOUTH FORK FLATHEAD	6	163	91
STILLWATER-WHITEFISH	7	224	101
SWAN	6	172	96
MISSION VALLEY	3	158	92
LITTLE BITTERROOT-ASHLEY	4	136	89
JOCKO	4	183	101
FLATHEAD in MONTANA	30	192	97
FLATHEAD RIVER BASIN	34	191	96

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

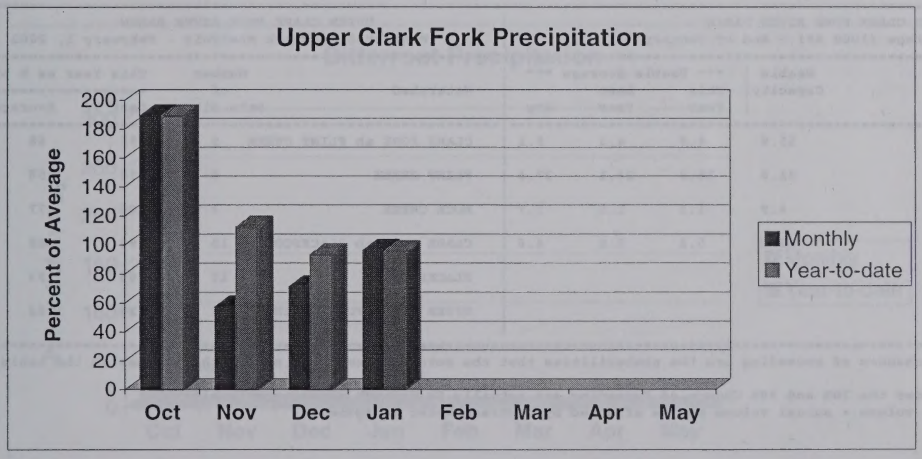
Upper Clark Fork River Basin

Snowpack conditions in the Upper Clark Fork River Basin were below average. Snow water content was 82 percent of average and 128 percent of last year.



January maximum swe was established in 1997 and minimum swe was in 1977; February maximum was in 1972 and minimum swe was in 1977; March maximum swe was in 1972 and minimum swe was in 1977; April maximum swe was in 1972 and minimum was in 1994; May maximum swe was in 1972 and minimum swe was in 1977; and June maximum swe was in 1975 and minimum swe was in 1987. Average is for the period 1971 through 2000.

Mountain precipitation during January was 97 percent of average and 278 percent of last year. Valley precipitation during January was 76 percent of average and 141 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2001, was 95 percent of average and 131 percent of last year.



East Fork Rock Creek storage was 53 percent of average and 112 percent of last year; Lower Willow Creek storage was 76 percent of average and 118 percent of last year; and Nevada Creek storage was 113 percent of average and 137 percent of last year.

Surface Water Supply Index (SWSI) was -2.7 in the Clark Fork River above Milltown; and -1.7 in the Blackfoot River.

UPPER CLARK FORK RIVER BASIN
Streamflow Forecasts - February 1, 2002

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
LITTLE BLACKFOOT nr Garrison	APR-JUL	17.2	29	37	48	54	80	76
	APR-SEP	19.9	33	41	49	60	87	84
FLINT CREEK nr Southern Cross	APR-JUL	0.9	5.1	8.0	58	10.9	15.1	13.7
	APR-SEP	0.2	5.5	9.0	56	12.5	17.8	16.2
FLINT CREEK blw Boulder Ck	APR-JUL	2.6	18.3	29	52	40	55	56
	APR-SEP	7.6	26	39	55	52	70	71
LOWER WILLOW CK RES Inflow	APR-JUL	0.5	5.0	8.0	64	11.0	15.5	12.5
	APR-SEP	1.3	5.9	9.0	67	12.1	16.7	13.5
MF ROCK CREEK nr Philipsburg	APR-JUL	19.9	32	40	63	48	60	64
	APR-SEP	23	36	45	63	54	67	72
ROCK CREEK nr Clinton	APR-JUL	57	118	160	59	202	263	270
	APR-SEP	76	143	188	62	233	300	305
NEVADA CREEK nr Finn	APR-JUL	2.8	8.3	12.0	69	15.7	21	17.3
	APR-SEP	3.7	9.4	13.3	70	17.2	23	18.9
BLACKFOOT RIVER nr Bonner	APR-JUL	409	567	675	84	783	941	805
	APR-SEP	468	636	750	84	864	1032	890
CLARK FORK abv Milltown	APR-JUL	168	336	450	74	564	732	605
	APR-SEP	216	403	530	75	657	844	705
CLARK FORK abv Missoula	APR-JUL	742	970	1125	80	1280	1508	1410
	APR-SEP	863	1111	1280	81	1449	1697	1590

UPPER CLARK FORK RIVER BASIN
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
EAST FORK ROCK CREEK	15.6	4.8	4.3	9.1
GEORGETOWN LAKE	31.0	26.9	24.1	27.4
LOWER WILLOW CREEK	4.9	1.3	1.1	1.7
NEVADA CREEK	12.6	5.2	3.8	4.6

UPPER CLARK FORK RIVER BASIN
Watershed Snowpack Analysis - February 1, 2002

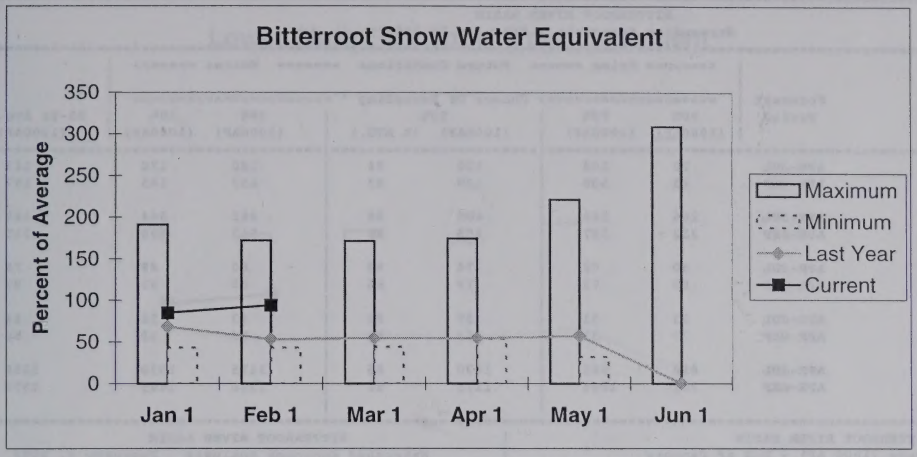
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
CLARK FORK ab FLINT CREEK	9	95	68
FLINT CREEK	6	70	58
ROCK CREEK	3	106	77
CLARK FORK ab BLACKFOOT	15	96	68
BLACKFOOT	13	165	93
UPPER CLARK FORK BASIN	27	128	82

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

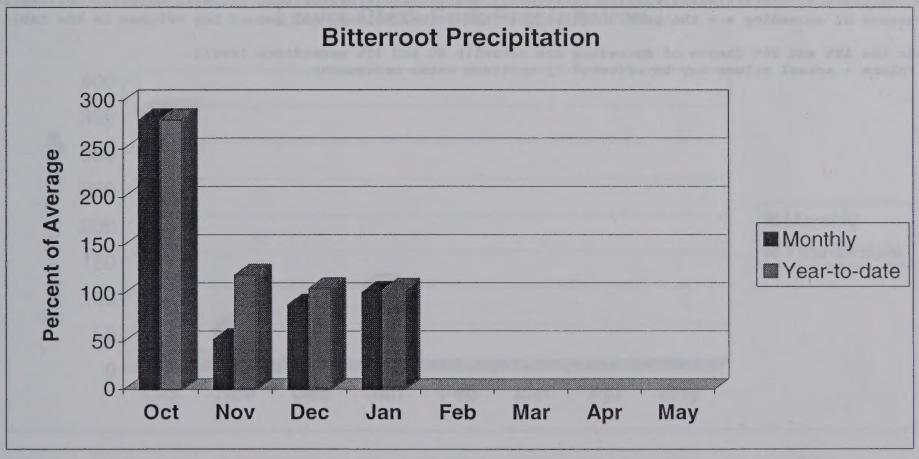
Bitterroot River Basin

Snowpack conditions in the Bitterroot River Basin were near average. Snow water content was 94 percent of average and 181 percent of last year.



January maximum swe was established in 1997 and minimum swe in 1977; February maximum swe was in 1972 and minimum was in 1977; March maximum swe was in 1972 and minimum swe was in 1977; April maximum swe was in 1972 and minimum swe was in 2001; May maximum swe was in 1972 and minimum swe was in 1987; and June maximum swe was 1972 and 1974 and minimum swe was in 1987, 1992, 1994, and 2001. Average is for the period 1971 through 2000.

Mountain precipitation during January was 102 percent of average and 374 percent of last year. Valley precipitation during January was 80 percent of average and 284 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2001, was 104 percent of average and 172 percent of last year.



Painted Rocks Lake storage was 111 percent of average and 88 percent of last year and Como storage was 81 percent of average and 94 percent of last year.

Surface Water Supply Index (SWSI) was -1.3 in the Bitterroot River.

BITTERROOT RIVER BASIN
Streamflow Forecasts - February 1, 2002

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
WF BITTERROOT nr Conner (2)	APR-JUL	70	100	120	84	140	170	143
	APR-SEP	75	108	130	83	152	185	157
BITTERROOT nr Darby	APR-JUL	266	349	405	88	461	544	460
	APR-SEP	312	397	455	88	513	598	515
COMO RESERVOIR Inflow	APR-JUL	60	68	74	95	80	88	78
	APR-SEP	65	73	79	96	85	93	82
SKALKAHO CK nr Hamilton	APR-JUL	23	31	37	84	43	52	44
	APR-SEP	27	37	43	86	50	59	50
BITTERROOT at Missoula	APR-JUL	810	965	1070	86	1175	1330	1250
	APR-SEP	901	1064	1175	86	1286	1449	1370

BITTERROOT RIVER BASIN
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
PAINTED ROCKS LAKE	31.7	7.8	8.9	7.0
COMO	34.9	9.0	9.6	11.1

BITTERROOT RIVER BASIN
Watershed Snowpack Analysis - February 1, 2002

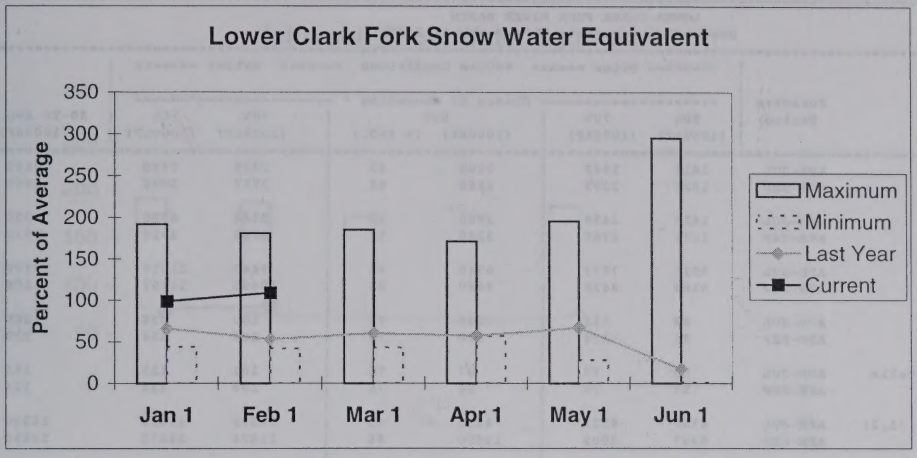
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
WEST FORK BITTERROOT	2	172	92
EAST SIDE BITTERROOT	3	158	88
WEST SIDE BITTERROOT	3	202	98
BITTERROOT RIVER BASIN	7	181	94

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

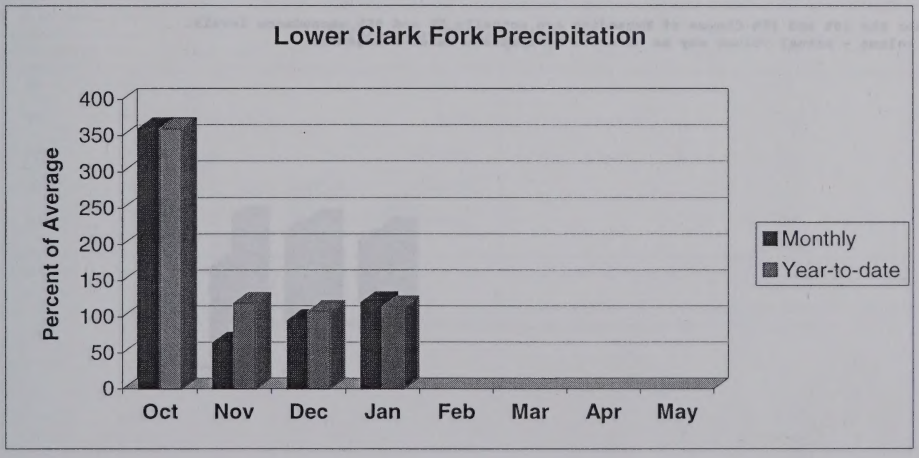
Lower Clark Fork River Basin

Snowpack conditions in the Lower Clark Fork River Basin were near average. Snow water content was 109 percent of average and 203 percent of last year.



January maximum swe was established in 1997 and minimum swe was in 1977; February maximum swe was in 1972 and minimum swe was in 1977; March maximum swe was in 1972 and minimum was in 1977; April maximum swe was in 1972 and minimum swe was in 1981; May maximum swe was in 1972 and minimum swe was in 1977; and June maximum swe was in 1974 and minimum swe was in 1977. Average is for the period 1971 through 2000.

Mountain precipitation during January was 117 percent of average and 344 percent of last year. Valley precipitation during January was 127 percent of average and 235 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2001, was 113 percent of average and 213 percent of last year.



Noxon Rapids storage was 103 percent of average and 106 percent of last year.

Surface Water Supply Index (SWSI) was -1.9 in the Clark Fork River below Bitterroot River and -1.4 in the Clark Fork River below Flathead River.

LOWER CLARK FORK RIVER BASIN
Streamflow Forecasts - February 1, 2002

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
CLARK FORK blw Missoula	APR-JUL	1611	1962	2200	83	2439	2790	2660
	APR-SEP	1824	2203	2460	83	2717	3096	2960
CLARK FORK at St. Regis (1)	APR-JUL	1415	2436	2900	82	3364	4385	3520
	APR-SEP	1631	2765	3280	84	3795	4929	3910
CLARK FORK nr Plains (1,2)	APR-JUL	5511	7573	8510	84	9447	11509	10100
	APR-SEP	6163	8430	9460	85	10490	12757	11100
THOMPSON nr Thompson Falls	APR-JUL	68	116	148	72	180	228	205
	APR-SEP	86	136	170	74	204	254	230
PROSPECT CREEK at Thompson Falls	APR-JUL	52	73	87	75	101	122	116
	APR-SEP	57	79	94	76	109	131	124
CLARK FK at Whitehorse Rpds (1,2)	APR-JUL	6157	8521	9595	85	10669	13033	11330
	APR-SEP	6907	9509	10690	86	11871	14473	12460

LOWER CLARK FORK RIVER BASIN
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
NOXON RAPIDS	335.0	320.3	301.1	310.9

LOWER CLARK FORK RIVER BASIN
Watershed Snowpack Analysis - February 1, 2002

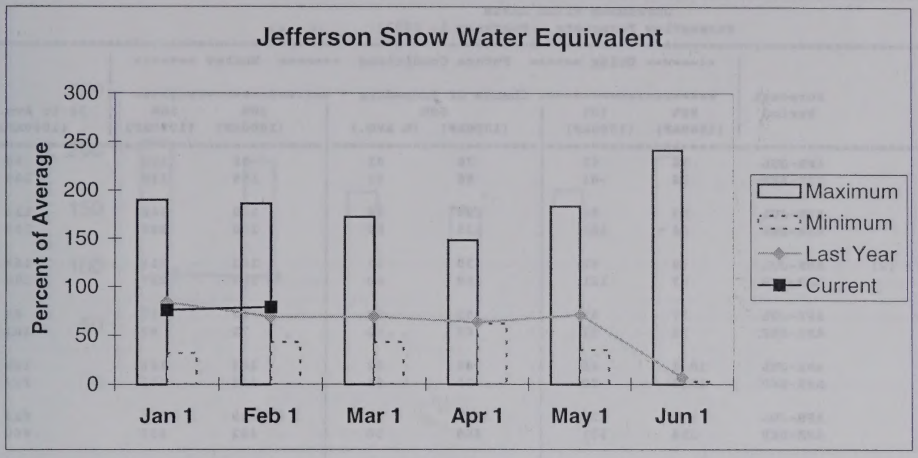
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
LOWER CLARK FORK BASIN	8	203	109

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

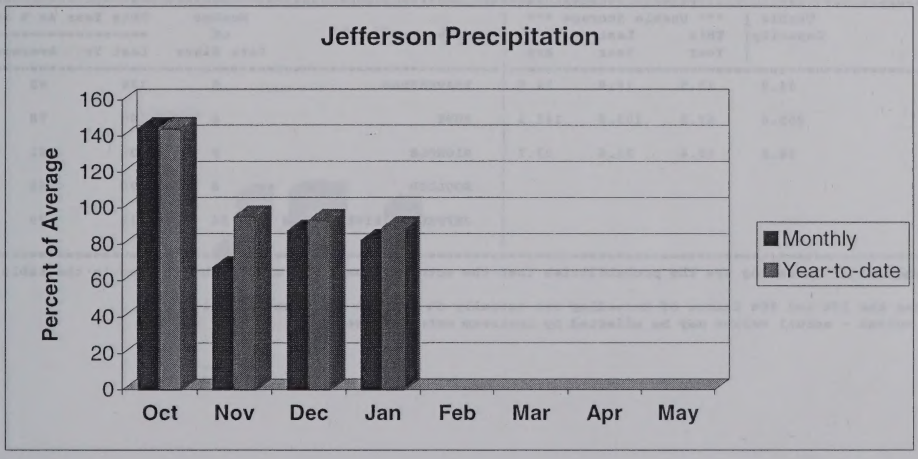
Jefferson River Basin

Snowpack conditions in the Jefferson River Basin were below average. Snow water content was 79 percent of average and 111 percent of last year.



January maximum swe was established in 1997 and minimum swe was in 1977; February maximum swe was in 1997 and minimum was in 1977; March maximum swe was in 1972 and minimum was in 1977; April maximum swe was in 1997 and minimum was in 1977; May maximum swe was in 1975 and minimum swe was in 1977; and June maximum swe was in 1982 and minimum in 1987. Average is for the period 1971 through 2000.

Mountain precipitation during January was 81 percent of average and 236 percent of last year. Valley precipitation during January was 112 percent of average and 294 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2001, was 89 percent of average and 112 percent of last year.



Lima storage was 40 percent of average and 69 percent of last year; Clark Canyon storage was 48 percent of average and 65 percent of last year; and Ruby River storage was 82 percent of average and 86 percent of last year.

Surface Water Supply Index (SWSI) was -2.9 in the Beaverhead River; -2.2 in the Ruby River; -3.1 in the Big Hole River; -2.5 in the Boulder River; and -2.9 in the Jefferson River as a whole.

JEFFERSON RIVER BASIN
Streamflow Forecasts - February 1, 2002

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
LIMA RESERVOIR Inflow (2)	APR-JUL	36	61	78	81	95	120	96
	APR-SEP	36	66	86	83	106	136	104
CLARK CANYON Inflow (2)	APR-JUL	52	80	100	76	120	148	131
	APR-SEP	64	100	125	80	150	186	156
BEAVERHEAD RIVER at Barretts (2)	APR-JUL	49	97	130	77	163	211	168
	APR-SEP	63	121	160	80	199	257	200
RUBY RIVER Reservoir Inflow	APR-JUL	27	42	52	62	62	77	84
	APR-SEP	34	51	63	62	75	92	101
BIG HOLE RIVER at Wisdom	APR-JUL	10.0	45	68	62	106	161	110
	APR-SEP	12.0	50	75	64	115	173	117
BIG HOLE RIVER nr Melrose	APR-JUL	212	291	345	57	439	578	610
	APR-SEP	234	321	380	58	482	633	660
BOULDER RIVER nr Boulder	APR-JUL	19.6	35	45	58	63	89	78
	APR-SEP	22	38	49	58	68	96	85
WILLOW CREEK Reservoir Inflow	APR-JUL	3.2	7.2	10.0	56	14.9	22	17.9
	APR-SEP	3.3	8.0	11.2	56	16.9	25	20
JEFFERSON RIVER nr Three Forks (2)	APR-JUL	236	342	415	53	552	753	780
	APR-SEP	269	386	465	54	612	828	860

JEFFERSON RIVER BASIN
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
LIMA	84.0	13.5	19.6	34.0
CLARK CANYON	255.6	67.5	103.9	141.1
RUBY RIVER	38.8	19.4	22.6	23.7

JEFFERSON RIVER BASIN
Watershed Snowpack Analysis - February 1, 2002

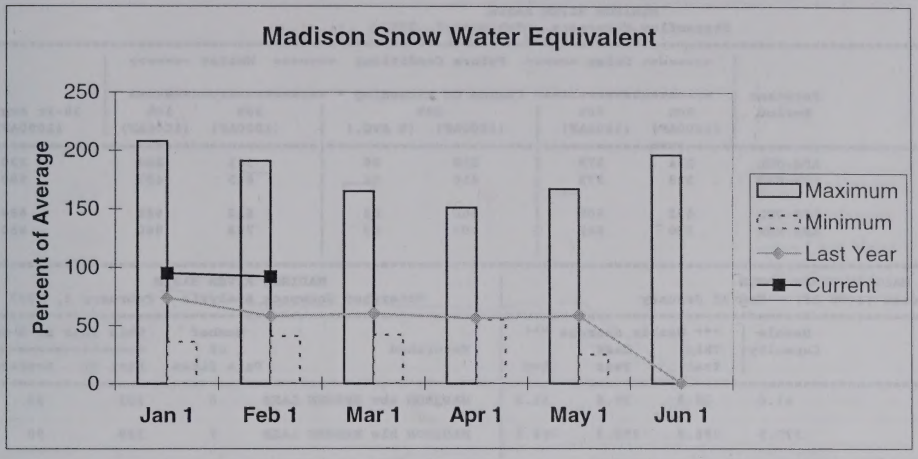
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
BEAVERHEAD	8	126	85
RUBY	4	100	78
BIGHOLE	9	128	81
BOULDER	8	76	65
JEFFERSON RIVER BASIN	24	111	79

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

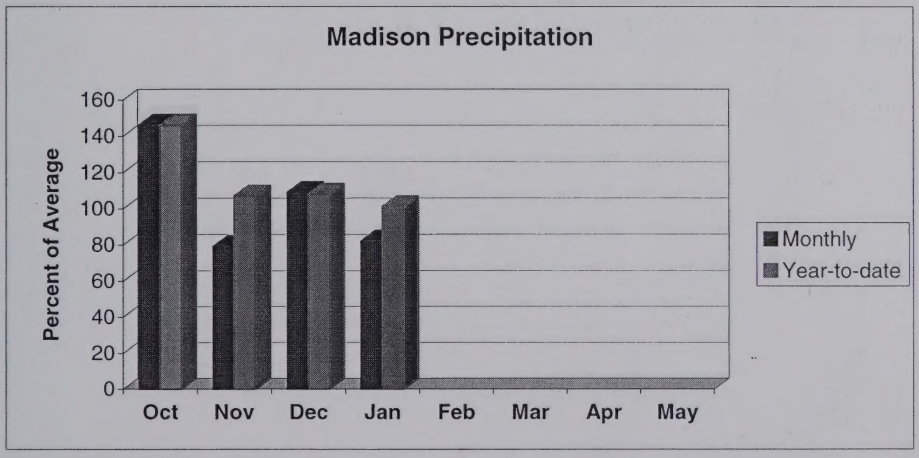
Madison River Basin

Snowpack conditions in the Madison River Basin were near average. Snow water content was 92 percent of average and 157 percent of last year.



January maximum swe was established in 1997 and minimum swe was in 1977; February maximum swe was in 1997 and minimum was in 1977; March maximum swe was in 1997 and minimum was in 1977; April maximum swe was in 1997 and minimum was in 1977; May maximum swe was in 1997 and minimum swe was in 1977; and June maximum swe was in 1995 and minimum in 2001. Average is for the period 1971 through 2000.

Mountain and valley precipitation during January was 82 percent of average and 293 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2001, was 101 percent of average and 147 percent of last year.



Ennis Lake storage was 92 percent of average and 98 percent of last year and Hebgen Lake storage was 108 percent of average and 96 percent of last year.

Surface Water Supply Index (SWSI) was +0.2 for the Madison River.

MADISON RIVER BASIN
Streamflow Forecasts - February 1, 2002

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
HEBGEN Reservoir Inflow	APR-JUL	234	279	310	80	341	386	390
	APR-SEP	323	375	410	82	445	497	500
ENNIS Reservoir Inflow (2)	APR-JUL	432	508	560	82	612	688	680
	APR-SEP	550	642	705	83	768	860	850

MADISON RIVER BASIN
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
ENNIS LAKE	41.0	28.9	29.6	31.3
HEBGEN LAKE	377.5	286.9	298.2	266.5

MADISON RIVER BASIN
Watershed Snowpack Analysis - February 1, 2002

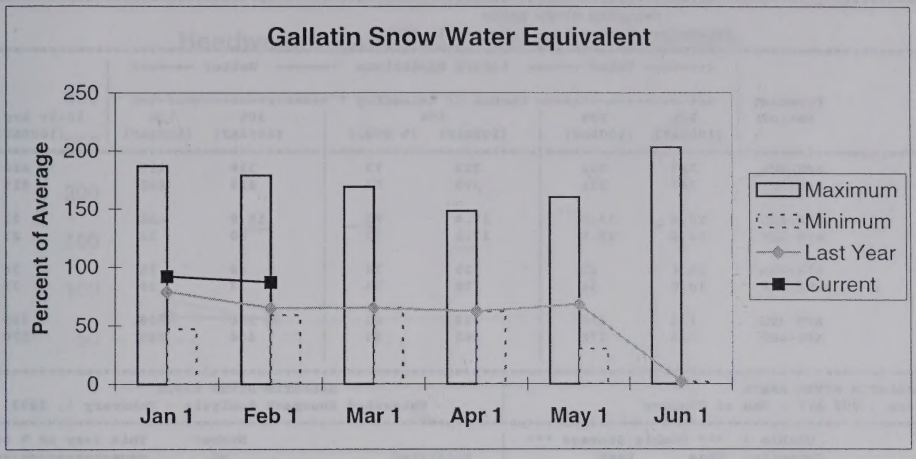
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
MADISON abv HEBGEN LAKE	6	203	93
MADISON blw HEBGEN LAKE	7	130	90
MADISON RIVER BASIN	13	157	92

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

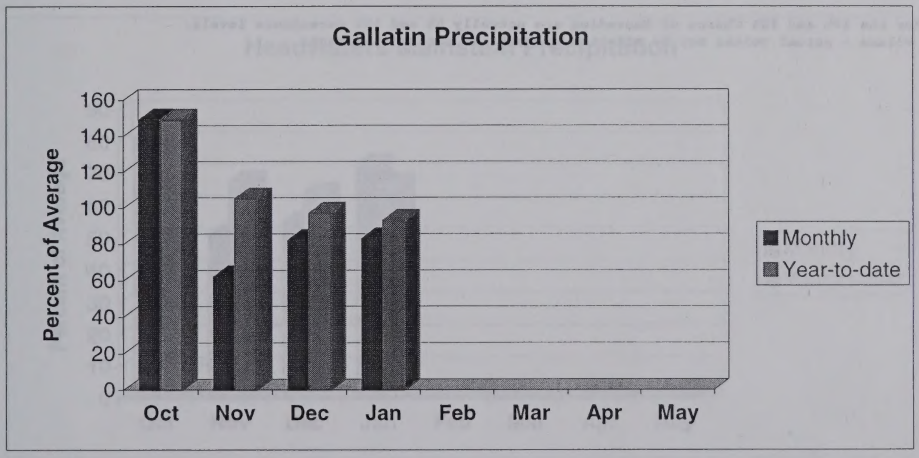
Gallatin River Basin

Snowpack conditions in the Gallatin River Basin were below average. Snow water content was 87 percent of average and 130 percent of last year.



January maximum swe was established in 1997 and minimum swe was in 1966; February maximum swe was in 1997 and minimum was in 1977; March maximum swe was in 1997 and minimum was in 1977 and 1987; April maximum swe was in 1997 and minimum was in 2001; May maximum swe was in 1970 and minimum swe was in 1987; and June maximum swe was in 1975 and minimum in 2001. Average is for the period 1971 through 2000.

Mountain precipitation during January was 83 percent of average and 245 percent of last year. Valley precipitation during January was 107 percent of average and 183 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2001, was 93 percent of average and 133 percent of last year.



Middle Creek storage was 151 percent of average and 98 percent of last year.

Surface Water Supply Index (SWSI) was -2.1 for the Gallatin River.

GALLATIN RIVER BASIN
Streamflow Forecasts - February 1, 2002

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
GALLATIN RIVER nr Gateway	APR-JUL	225	282	320	73	358	415	440
	APR-SEP	267	331	375	73	419	483	515
HYALITE RESERVOIR Inflow	APR-JUL	10.4	13.6	15.8	72	18.0	21	22
	APR-SEP	12.2	15.6	17.9	72	20	24	25
HYALITE CREEK nr Bozeman (2)	APR-JUL	15.4	21	25	74	29	35	34
	APR-SEP	18.0	24	29	73	33	39	39
GALLATIN RIVER at Logan (2)	APR-JUL	112	230	310	63	390	508	495
	APR-SEP	145	276	365	64	454	585	570

GALLATIN RIVER BASIN
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MIDDLE CREEK	10.2	6.5	6.6	4.3

GALLATIN RIVER BASIN
Watershed Snowpack Analysis - February 1, 2002

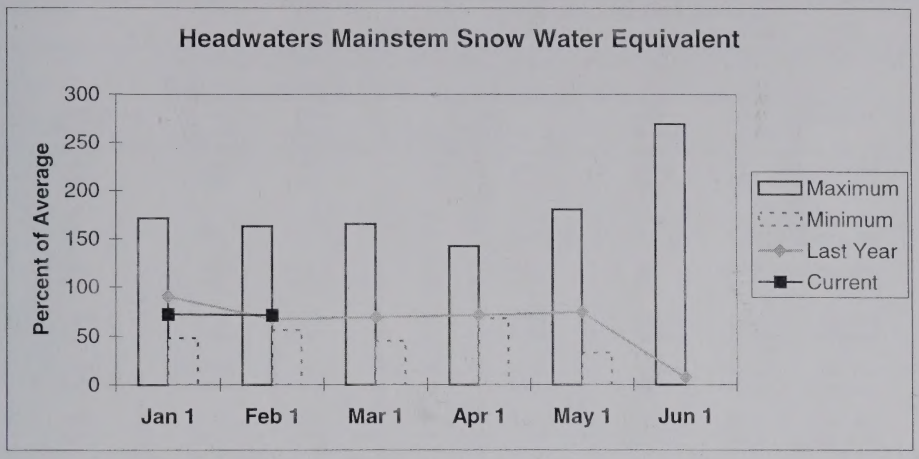
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
UPPER GALLATIN	4	147	94
HYALITE	3	91	70
BRIDGER	1	156	101
GALLATIN RIVER BASIN	8	130	88

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

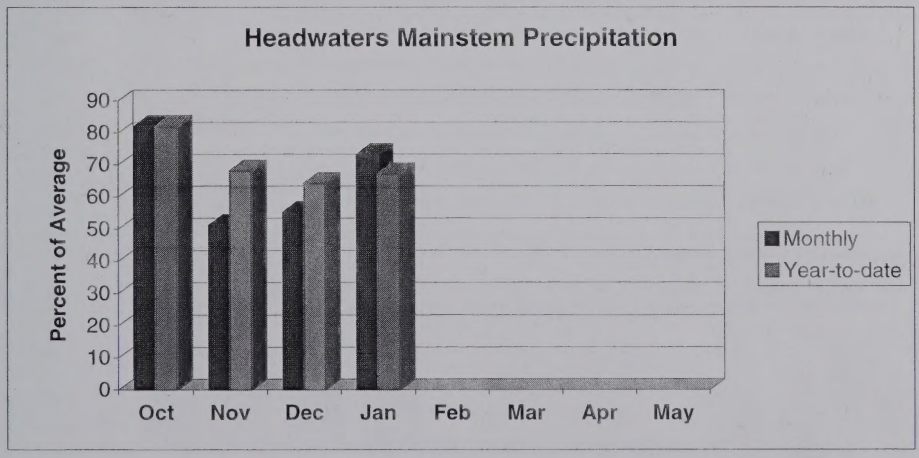
Missouri Mainstem River Basin

Snowpack conditions in the Headwaters Missouri Mainstem River Basin were below average. Snow water content was 71 percent of average and 105 percent of last year.



January maximum swe was established in 1997 and minimum swe in 1977; February maximum swe was in 1972 and minimum swe was in 1977; March maximum swe in 1972 and minimum swe was in 1977; April maximum swe was in 1972 and minimum swe was in 1961 and 1966; May maximum swe was in 1975 and minimum swe was in 1977; and June maximum swe was in 1975 and minimum swe was in 1992. Average is for the period 1971 through 2000.

Mountain precipitation during January was 71 percent of average and 250 percent of last year. Valley precipitation during January was 79 percent of average and 180 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2001, was 67 percent of average and 79 percent of last year.



Canyon Ferry Lake storage was 89 percent of average and 96 percent of last year; Helena Valley storage was 102 percent of average and 75 percent of last year; Lake Helena storage was 85 percent of average and the 102 percent of last year; Hauser & Helena storage was 118 percent of average and 119 percent of last year; Holter Lake storage was 102 percent of average and 100 percent of last year; and Fort Peck Lake storage was 81 percent of average and 93 percent of last year.

Surface Water Supply Index (SWSI) was -1.7 in the Missouri River above Canyon Ferry; -1.9 in the Missouri River below Canyon Ferry; -2.7 in the Dearborn River near Craig; -2.1 in the Missouri River above Fort Peck; and -2.2 in the Missouri River below Fort Peck.

==

==

==

MI

PR

DE

MI

MI

MI

MI

LA

==

==

Re

==

CA

HE

LA

HA

HO

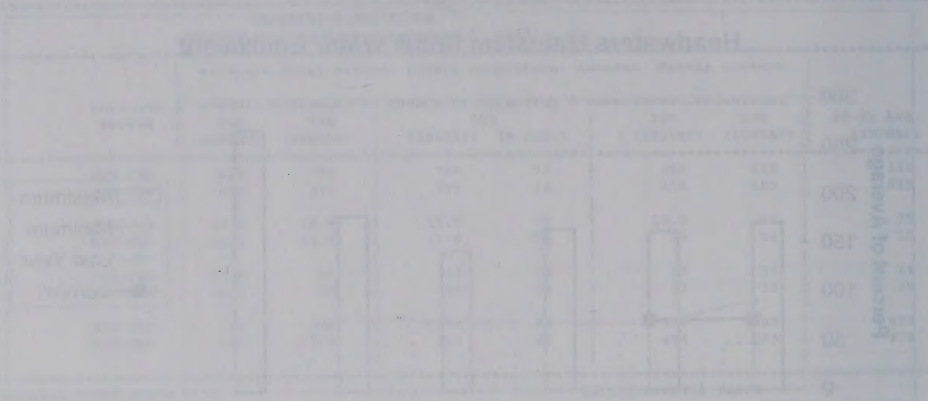
FC

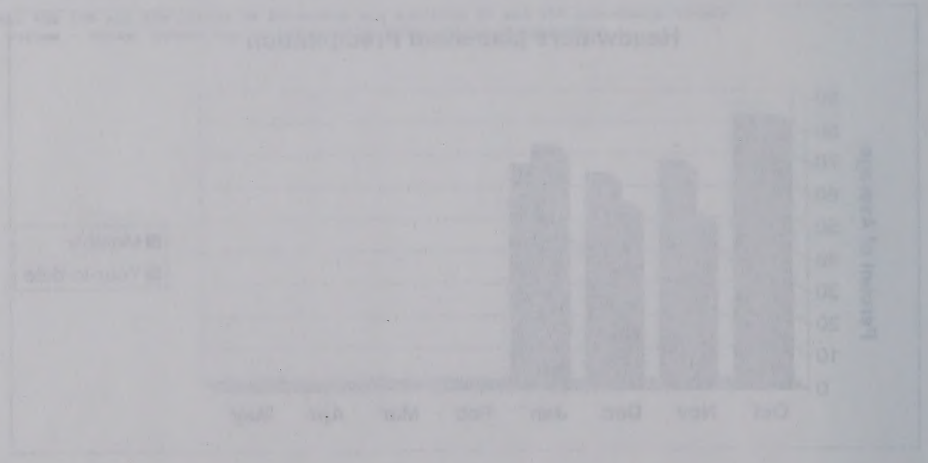
==

*

(1

(2





Oct
Nov
Dec
Jan
Feb
Mar
Apr
May

MISSOURI MAINSTEM RIVER BASIN
Streamflow Forecasts - February 1, 2002

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SSOURI RIVER at Toston (2)	APR-JUL	597	1063	1380	67	1697	2163	2050
	APR-SEP	693	1282	1615	68	1948	2533	2390
ICKLY PEAR CREEK nr Clancy	APR-JUL	5.5	10.6	14.0	67	17.4	23	21
	APR-SEP	6.4	12.6	16.8	67	21	27	25
ARBORN nr Criag	APR-JUL	17.0	58	85	70	112	153	121
	APR-SEP	19.0	61	90	72	119	161	125
SSOURI RIVER at Fort Benton (2)	APR-JUL	1062	1725	2175	73	2626	3289	2990
	APR-SEP	1282	2092	2643	74	3194	4004	3570
SSOURI RIVER at Virgelle (2)	APR-JUL	1379	2046	2500	73	2954	3621	3450
	APR-SEP	1218	2536	2990	74	3444	4750	4060
SSOURI RIVER nr Landusky (2)	APR-JUL	1542	2124	2520	68	2916	3498	3690
	APR-SEP	1262	2670	3040	70	3410	4785	4350
SSOURI RIVER below Fort Peck (2)	APR-JUL	1541	2231	2700	72	3169	3859	3740
	APR-SEP	1256	2651	3100	72	3549	4936	4330
KE SAKAKAWEA Inflow (2)	APR-JUL	3581	5432	6690	69	7948	9799	9740
	APR-SEP	3920	6088	7616	68	9144	11312	11200

MISSOURI MAINSTEM RIVER BASIN
Reservoir Storage (1000 AF) - End of January

servoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
NYON FERRY LAKE	2043.0	1396.0	1456.0	1576.1
LENA VALLEY	9.2	4.5	6.0	4.4
KE HELENA	10.4	11.1	10.9	13.0
USER & HELENA	61.9	74.8	63.1	63.2
LTER LAKE	81.9	81.3	81.1	79.4
RT PECK LAKE	18910.0	12070.0	13000.0	14887.0

MISSOURI MAINSTEM RIVER BASIN
Watershed Snowpack Analysis - February 1, 2002

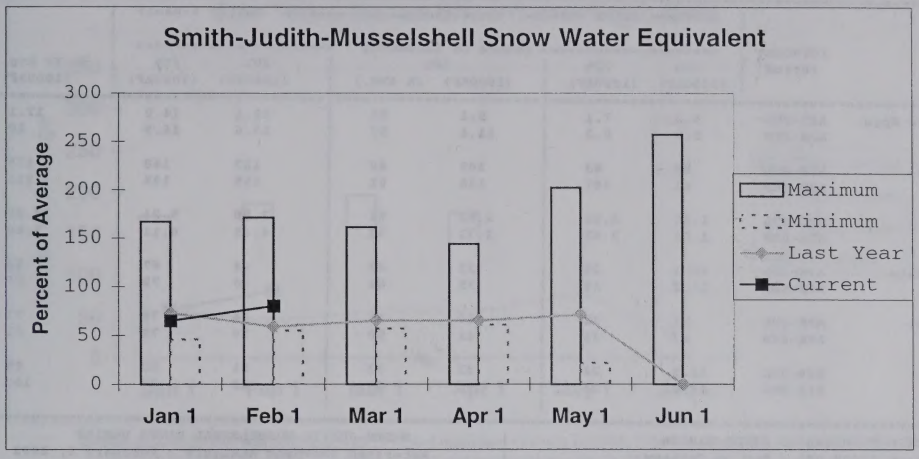
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
HEADWATERS MAINSTEM	7	105	71
SMITH-JUDITH-MUSSELSHELL	10	131	80
SUN-TETON-MARIAS	7	181	81
MAINSTEM ab FT PECK RES	23	135	77
MILK RIVER BASIN	10	28	24
MISSOURI MAINSTEM BASIN	32	111	70

90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
) - The value is natural volume - actual volume may be affected by upstream water management.

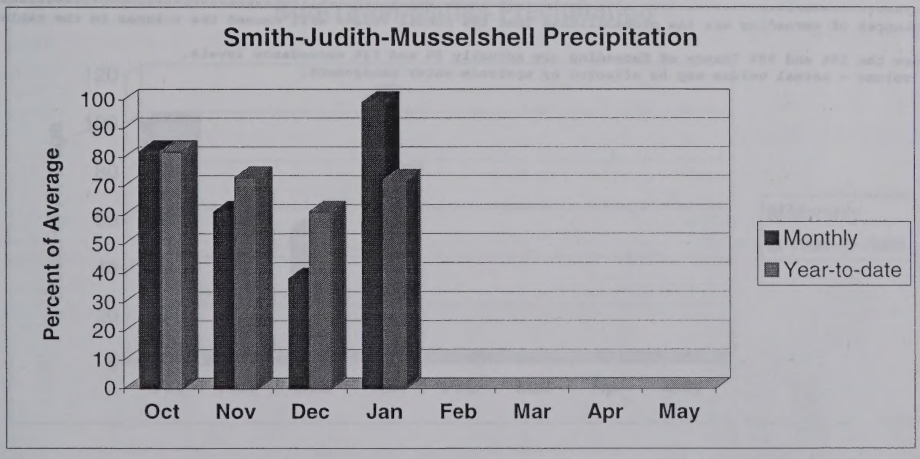
Smith-Judith-Musselshell River Basins

Snowpack conditions in the Smith-Judith-Musselshell River Basins were below average. Snow water content in the Smith River Basin was 82 percent of average and 150 percent of last year; the Judith River Basin was 76 percent of average and 120 percent of last year; and the Musselshell Basin River was 81 percent of average and 132 percent of last year.



January maximum swe was established in 1997 and minimum swe in 1988; February maximum swe was in 1978 and minimum swe was in 1987; March maximum swe was in 1978 and minimum swe was in 1987; April maximum swe was in 1970 and minimum swe was in 1992; and May maximum swe was in 1970 and minimum swe was in 1987; and June maximum swe was in 1967 and minimum swe was in 1987, 1992, 1994, and 2001. Average is for the period 1971 through 2000.

Mountain and valley precipitation during January in the Smith-Belts was 103 percent of average and 298 percent of last year; in the Judith was 109 percent of average and 290 percent of last year; and in the Musselshell was 91 percent of average and 415 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2001, was 72 percent of average and 100 percent of last year.



Smith River storage was 22 percent of average and 70 percent of last year; Bair storage was 44 percent of average and 107 percent of last year; Martinsdale storage was 1 percent of average and 6 percent of last year; and Deadman's Basin was 27 percent of average and 61 percent of last year.

Surface Water Supply Index (SWSI) was -3.0 in the Smith River and -2.7 in the Musselshell River.

SMITH-JUDITH-MUSSELSHELL RIVER BASINS
Streamflow Forecasts - February 1, 2002

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SHEEP CREEK nr White Sulphur Spgs.	APR-JUL	4.2	7.1	9.1	53	11.1	14.0	17.1
	APR-SEP	5.9	9.2	11.4	57	13.6	16.9	20
SMITH RIVER abv Eagle Creek	APR-JUL	50	83	105	60	127	160	175
	APR-SEP	61	101	128	61	155	195	210
NF MUSSELSHELL nr Delpine	APR-JUL	1.34	2.22	2.82	61	3.80	5.24	4.60
	APR-SEP	1.61	2.63	3.33	62	4.45	6.11	5.40
SF MUSSELSHELL abv Martinsdale	APR-JUL	10.1	23	32	62	46	67	52
	APR-SEP	11.2	25	35	62	50	72	56
MUSSELSHELL at Harlowton (2)	APR-JUL	21	32	40	51	54	76	77
	APR-SEP	22	33	41	50	56	79	81
MUSSELSHELL nr Roundup (2)	APR-JUL	16.8	26	32	32	51	80	99
	APR-SEP	16.0	24	30	29	49	78	102

SMITH-JUDITH-MUSSELSHELL RIVER BASINS
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
SMITH RIVER	10.6	1.4	2.0	6.3
BAIR	7.0	1.6	1.5	3.6
MARTINSDALE	23.1	0.1	1.8	10.1
DEADMAN'S BASIN	72.2	12.6	20.5	46.8

SMITH-JUDITH-MUSSELSHELL RIVER BASINS
Watershed Snowpack Analysis - February 1, 2002

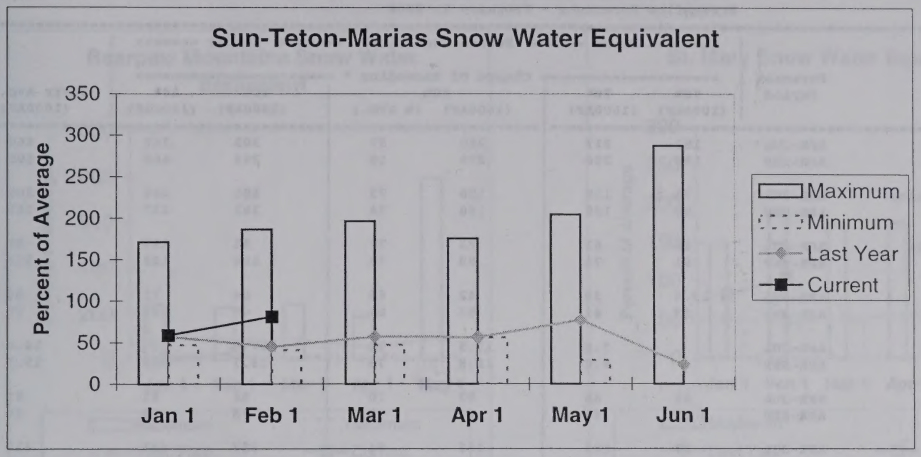
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
SMITH	6	150	82
JUDITH	4	120	76
MUSSELSHELL	3	132	81
SMITH-JUDITH-MUSSELSHELL	10	131	80

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

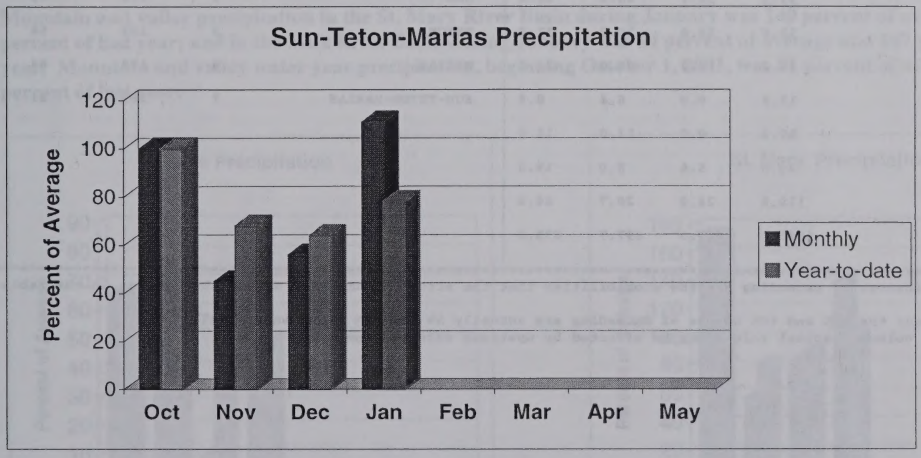
Sun-Teton-Marias River Basins

Snowpack conditions in the Sun-Teton-Marias River Basins were below average. Snow water content in the Sun River Basin was 82 percent of average and 168 percent of last year; in the Teton River Basin was 64 percent of average and 139 percent of last year; and in the Marias River Basin was 84 percent of average and 194 percent of last year.



January maximum swe was established in 1997 and minimum swe was in 1988; February maximum swe was in 1972 and minimum swe was in 2001; March maximum swe was in 1972 and minimum swe was in 1984; April maximum swe was in 1972 and minimum swe was in 1984 and 1998; May maximum swe was in 1972 and minimum swe was in 1977; and June maximum was in 1972 and minimum swe was in 1987, 1992, and 1998. Average is for the period 1971 through 2000.

Mountain and valley precipitation during January in the Sun was 107 percent of average and 335 percent of last year; in the Teton was 104 percent of average and 354 percent of last year; and in the Marias was 114 percent of average and 424 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2001, was 78 percent of average and 142 percent of last year.



Gibson storage was 56 percent of average and 143 percent of last year; Pishkun storage was 111 percent of average and 103 percent of last year; Willow Creek storage was 62 percent of average and 70 percent of last year; Lower Two Medicine Lake storage was 0 percent of average and 0 percent of last year; Four Horns Lake storage was 0 percent of average and 0 percent of last year; Swift storage was 35 percent of average and 108 percent of last year; Lake Frances storage was 36 percent of average and 116 percent of last year; and Lake Elwell (Tiber) storage was 104 percent of average and 95 percent of last year.

Surface Water Supply Index (SWSI) was -3.0 in the Sun River; -2.8 in the Teton River; -2.9 in the Birch/Dupuyer Creeks; -3.3 in the Marias River above Tiber, and -2.4 in the Marias below Tiber.

SUN-TETON-MARIAS RIVER BASINS
Streamflow Forecasts - February 1, 2002

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
GIBSON Reservoir Inflow	APR-JUL	153	217	260	57	303	367	460
	APR-SEP	184	250	295	58	340	406	505
TWO MEDICINE RIVER nr Browning	APR-JUL	74	119	150	73	181	226	205
	APR-SEP	83	129	160	74	191	237	215
BADGER CREEK nr Browning (2)	APR-JUL	40	61	76	77	91	112	99
	APR-SEP	51	74	90	78	106	129	115
SWIFT RESERVOIR Inflow	APR-JUL	13.4	30	42	66	54	71	64
	APR-SEP	23	41	53	69	65	83	77
DUPUYER CREEK nr Valier	APR-JUL		5.6	10.5	75	17.0	27	14.0
	APR-SEP		6.6	11.8	75	18.7	29	15.7
CUT BANK CREEK at Cut Bank	APR-JUL	29	45	57	70	68	85	81
	APR-SEP	33	51	63	70	75	93	90
MARIAS RIVER nr Shelby (2)	APR-JUL	77	183	255	61	327	433	415
	APR-SEP	87	196	270	61	344	453	440
TETON nr Dutton	APR-JUL	7.2	16.6	23	45	37	58	51
	APR-SEP	11.1	21	28	48	42	63	59

SUN-TETON-MARIAS RIVER BASINS
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
GIBSON	99.1	25.7	18.0	45.8
PISHKUN	32.0	19.8	19.2	17.8
WILLOW CREEK	32.2	13.9	20.0	22.4
LOWER TWO MEDICINE LAKE	11.9	0.0	6.4	8.8
FOUR HORNS LAKE	19.2	0.0	13.0	11.9
SWIFT	30.0	5.4	5.0	15.5
LAKE FRANCES	112.0	24.0	20.7	66.8
LAKE ELWELL (TIBER)	1347.0	660.0	697.7	635.5

SUN-TETON-MARIAS RIVER BASINS
Watershed Snowpack Analysis - February 1, 2002

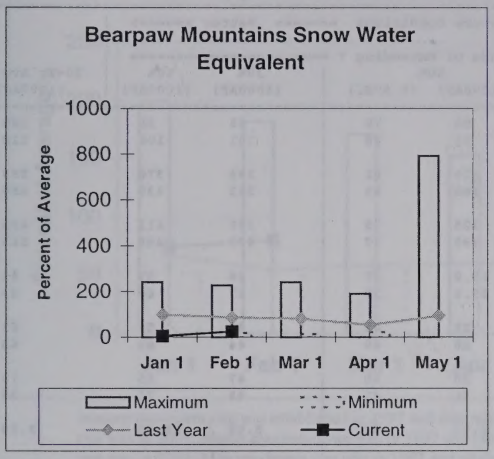
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
SUN	2	168	82
TETON	3	139	64
MARIAS	4	194	84
SUN-TETON-MARIAS	7	181	81

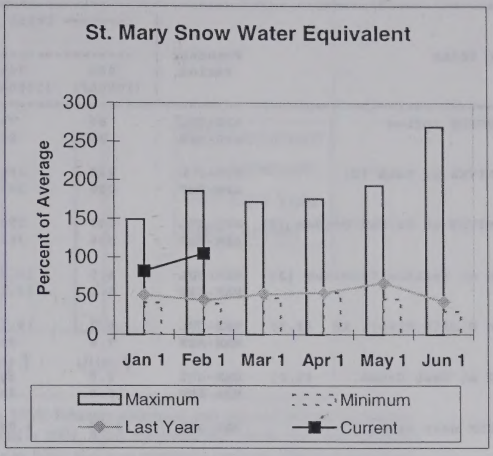
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

St. Mary and Milk River Basins

Snowpack conditions in the St. Mary and Milk River Basins were below average. Snow water content in the Saint Mary River Basin was 105 percent of average and 235 percent of last year. Snow water content in the Bearpaw Mountains was 29 percent of average and 36 percent of last year. Snow water content for the Cypress Hills in Canada was 20 percent of average and 22 percent of last year.

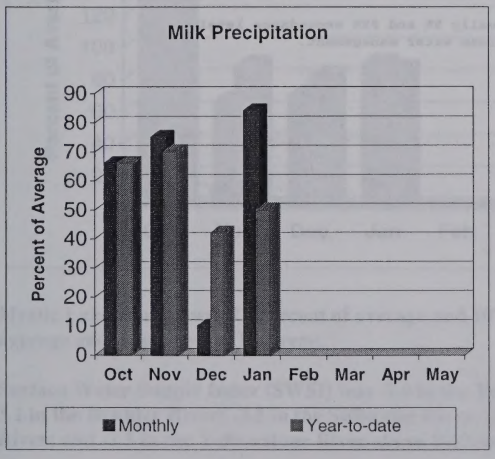


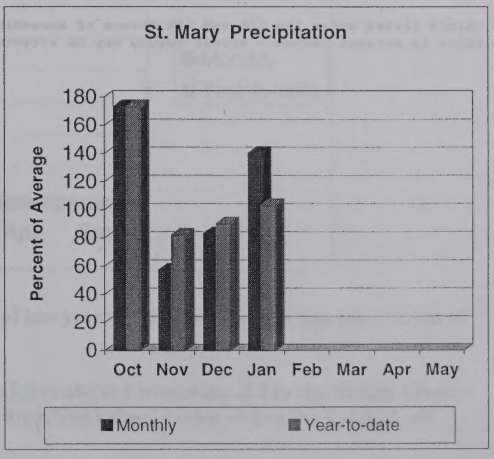


Bearpaw - January maximum swe was established in 1978 and minimum swe was in 1981; February maximum swe was 1978 and minimum was in 2001; March maximum swe was 1978 and minimum swe was 1995; April maximum swe was in 1985 and minimum swe was in 1973, 1983, and 1986; May maximum swe was 1975 and the minimum, 0.0, has occurred in several years. Average is for the period 1971 through 2000.

St. Mary - January maximum swe was established in 1997 and minimum swe was in 1988; February maximum swe was in 1972 and minimum swe was in 1977; March maximum swe was in 1972 and minimum swe was in 1977; April maximum swe was in 1967 and 1972 and minimum swe was in 2001; May maximum swe was in 1972 and minimum swe was in 1977; and June maximum swe was in 1972 and minimum swe was 1992. Average is for the period 1971 through 2000.

Mountain and valley precipitation in the St. Mary River Basin during January was 140 percent of average and 439 percent of last year; and in the Milk River Basin during January was 84 percent of average and 167 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2001, was 81 percent of average and 151 percent of last year.





Fresno storage was 14 percent of average and 40 percent of last year; Beaver Creek storage was 23 percent of average and 23 percent of last year; and Nelson storage was 36 percent of average and 102 percent of last year.

Surface Water Supply Index (SWSI) was -3.3 for the Milk River.

ST. MARY and MILK RIVER BASINS
Streamflow Forecasts - February 1, 2002

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>>						
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
LAKE SHERBURNE Inflow	APR-JUL	65	74	80	76	86	95	105
	APR-SEP	81	89	95	78	101	109	122
ST. MARY RIVER nr Babb (2)	APR-JUL	250	286	310	81	334	370	385
	APR-SEP	300	339	365	81	391	430	450
ST. MARY RIVER at US/CAN Border (2)	APR-JUL	239	290	325	75	360	411	435
	APR-SEP	304	358	395	77	432	486	515
MILK RIVER at Western Crossing (3)	MAR-JUL	4.5	11.6	15.0	37	26	37	41
	MAR-SEP	5.2	12.1	15.9	37	27	40	43
MILK RIVER @ Milk River, AB (2,3)	MAR-JUL	6.7	19.2	25	41	42	54	61
	MAR-SEP	7.9	20	26	40	44	60	66
MILK RIVER at East Cross. (2,3)	MAR-JUL	8.0	24	29	40	47	65	73
	MAR-SEP	9.9	26	31	41	49	71	76
BEAVER CREEK near Havre	MAR-JUL	0.25	3.08	5.00	52	8.69	14.13	9.60

ST. MARY and MILK RIVER BASINS
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
LAKE SHERBURNE	64.3	16.6	10.5	24.0
FRESNO	127.0	7.1	17.9	50.1
BEAVER CREEK	3.5	0.5	2.2	2.2
NELSON	66.8	12.4	12.1	34.2

ST. MARY and MILK RIVER BASINS
Watershed Snowpack Analysis - February 1, 2002

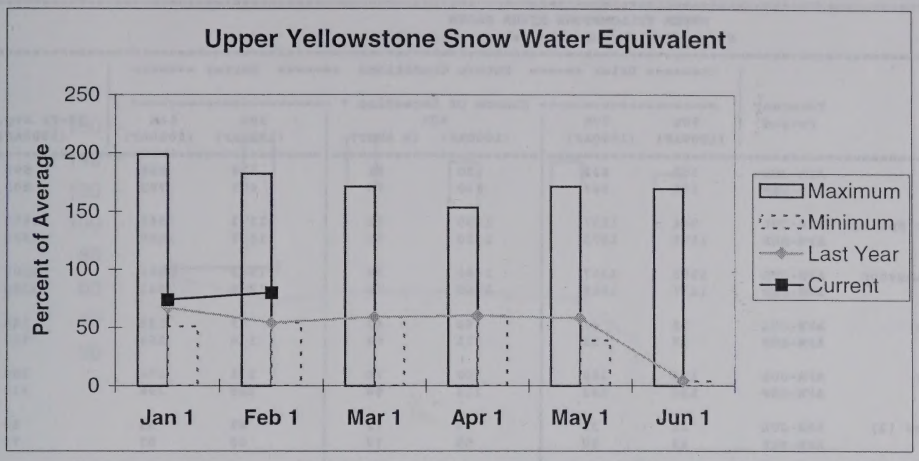
Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
ST. MARY	2	235	105
BEARPAW MOUNTAINS	4	36	29
CYPRESS HILLS, CANADA	6	22	20
MILK RIVER BASIN	9	28	25
ST. MARY & MILK BASINS	12	121	73

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

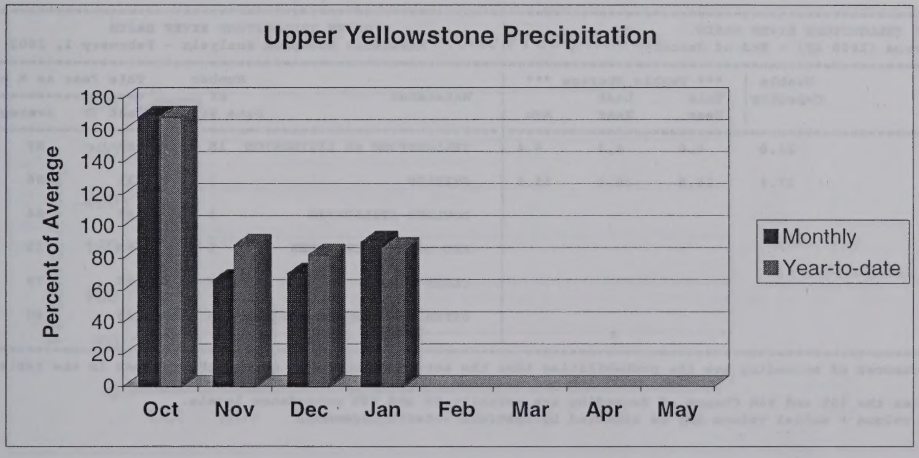
Upper Yellowstone River Basin

Snowpack conditions in the Upper Yellowstone River Basin were below average. Snow water content was 80 percent of average and 153 percent of last year.



January maximum swe was established in 1997 and minimum swe was in 1988; February maximum swe was in 1997 and minimum swe was in 2001; March maximum swe was in 1997 and minimum swe was in 2001; April maximum swe was in 1997 and minimum swe was in 2001; May maximum swe was in 1997 and minimum swe was in 1987; and June maximum swe was 1996 and minimum swe was in 2001. Average is for the period 1971 through 2000.

Mountain precipitation during January was 90 percent of average and 405 percent of last year. Valley precipitation during January was 93 percent of average and 273 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2001, was 86 percent of average and 139 percent of last year.



Mystic Lake storage was 72 percent of average and 107 percent of last year and Cooney storage was 106 percent of average and 84 percent of last year.

Surface Water Supply Index (SWSI) was -2.0 in the Yellowstone River above Livingston; -2.7 in the Shields River; -3.1 in the Boulder River; -3.5 in the Stillwater River; -3.1 in the Rock/Red lodge Creeks; -3.2 in the Clarks Fork River; and -2.5 in the Yellowstone River above Bighorn River.

UPPER YELLOWSTONE RIVER BASIN
Streamflow Forecasts - February 1, 2002

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
YELLOWSTONE at Lake Outlet	APR-JUL	362	432	480	81	528	598	590
	APR-SEP	475	567	630	78	693	785	805
YELLOWSTONE RIVER at Corwin Springs	APR-JUL	964	1137	1255	76	1373	1546	1650
	APR-SEP	1171	1373	1510	77	1647	1849	1970
YELLOWSTONE RIVER near Livingston	APR-JUL	1185	1337	1440	76	1543	1695	1900
	APR-SEP	1437	1618	1740	76	1862	2043	2280
SHIELDS RIVER nr Livingston	APR-JUL	29	49	62	43	93	139	145
	APR-SEP	33	55	71	44	106	159	162
BOULDER RIVER at Big Timber	APR-JUL	124	169	200	70	231	276	285
	APR-SEP	134	182	215	68	248	296	315
MYSTIC LAKE Reservoir Inflow (2)	APR-JUL	32	38	43	72	47	53	59
	APR-SEP	43	50	55	72	60	67	76
STILLWATER RIVER nr Absarokee (2)	APR-JUL	223	287	330	67	373	437	495
	APR-SEP	274	343	390	67	437	506	585
CLARKS FORK RIVER nr Belfry	APR-JUL	267	326	365	68	404	463	540
	APR-SEP	290	350	390	66	430	490	595
COONEY RESERVOIR Inflow (2)	APR-JUL	11.7	21	28	60	39	55	47
	APR-SEP	18.2	29	36	63	47	64	57
YELLOWSTONE RIVER at Billings (2)	APR-JUL	1833	2319	2650	76	2981	3467	3510
	APR-SEP	2513	2864	3220	78	3576	3832	4120

UPPER YELLOWSTONE RIVER BASIN
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MYSTIC LAKE	21.0	4.6	4.3	6.4
COONEY	27.4	16.5	19.6	15.6

UPPER YELLOWSTONE RIVER BASIN
Watershed Snowpack Analysis - February 1, 2002

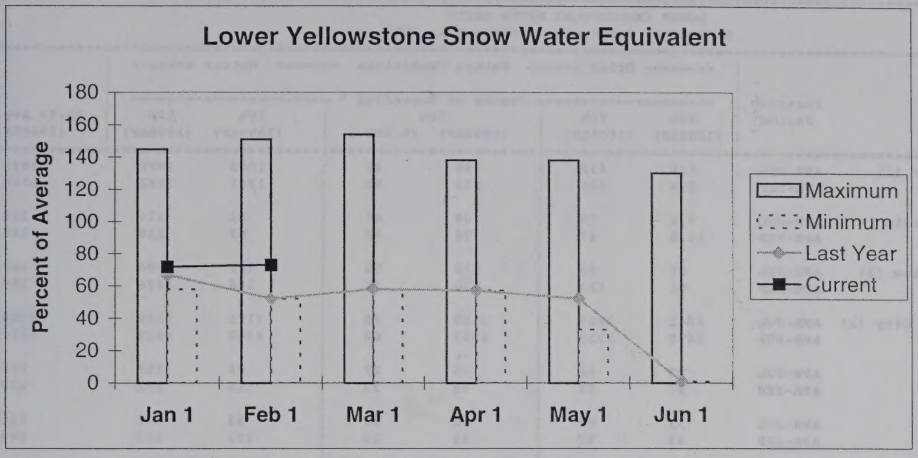
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
YELLOWSTONE ab LIVINGSTON	15	159	83
SHIELDS	3	131	86
BOULDER-STILLWATER	3	147	84
RED LODGE-ROCK CREEK	1	65	33
CLARK'S FORK	7	166	79
UPPER YELLOWSTONE BASIN	25	153	80

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

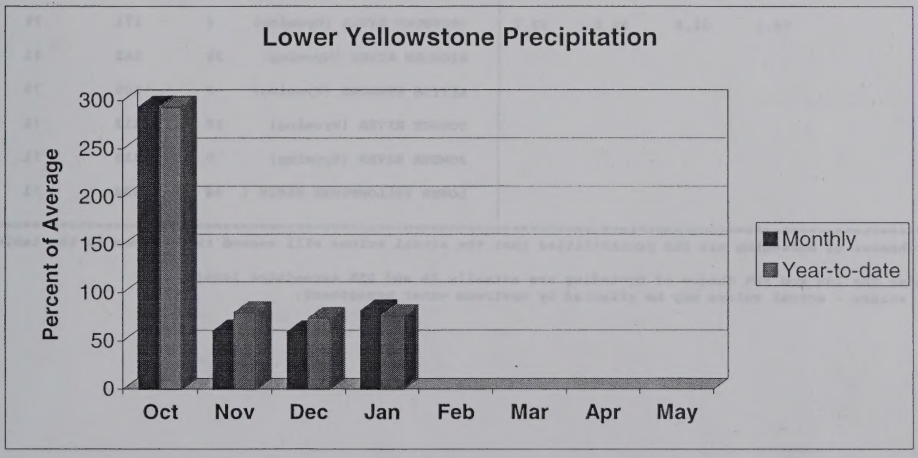
Lower Yellowstone River Basin

Snowpack conditions in the Lower Yellowstone River Basin, in Wyoming, were below average. Snow water content was 73 percent of average and 136 percent of last year.



January maximum swe was established in 1997 and minimum swe was in 2000; February maximum swe was in 1997 and minimum swe was in 2001; March maximum swe was in 1986 and minimum swe was in 2001; April maximum swe was in 1986 and minimum swe was in 2001; May maximum swe was in 1997 and minimum swe was in 1981; and June maximum swe was in 1995 and minimum swe was in 2001. Average is for the period 1971 through 2000.

Mountain and valley precipitation during January was 81 percent of average and 314 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2001, was 76 percent of average and 114 percent of last year.



Bighorn Lake storage was 103 percent of average and 92 percent of last year and Tongue River storage was 125 percent of average and 93 percent of last year.

Surface Water Supply Index (SWSI) was -3.3 in the Bighorn River below Bighorn Lake; -2.5 in the Little Bighorn River; -2.9 in the Yellowstone River below Bighorn River; -2.8 in the Tongue River; and -3.7 in the Powder River.

LOWER YELLOWSTONE RIVER BASIN
Streamflow Forecasts - February 1, 2002

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
BIGHORN RIVER nr St. Xavier (2)	APR-JUL	126	498	750	47	1002	1374	1610
	APR-SEP	278	669	935	53	1201	1592	1760
LITTLE BIGHORN RIVER nr Hardin	APR-JUL	9.0	39	60	47	81	111	128
	APR-SEP	14.0	47	70	49	93	126	144
TONGUE RIVER RESERVOIR Inflow (2)	APR-JUL	65	92	110	50	147	200	220
	APR-SEP	81	110	130	52	168	224	250
YELLOWSTONE RIVER at Miles City (2)	APR-JUL	1841	2829	3500	65	4171	5159	5360
	APR-SEP	2670	3330	4095	66	4860	5403	6210
POWDER RIVER at Moorehead	APR-JUL	28	44	55	27	96	157	205
	APR-SEP	37	55	68	30	110	171	230
POWDER RIVER near Locate	APR-JUL	33	43	50	21	83	132	235
	APR-SEP	39	55	65	25	107	168	260
YELLOWSTONE RIVER nr Sidney (2)	APR-JUL	1595	2670	3400	62	4130	5205	5480
	APR-SEP	2512	3167	4015	64	4863	5526	6280

LOWER YELLOWSTONE RIVER BASIN
Reservoir Storage (1000 AF) - End of January

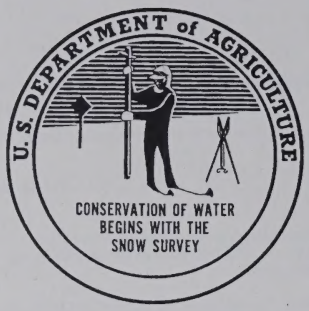
Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BIGHORN LAKE	1356.0	701.1	865.0	859.5
TONGUE RIVER	79.1	21.8	34.0	22.7

LOWER YELLOWSTONE RIVER BASIN
Watershed Snowpack Analysis - February 1, 2002

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
WIND RIVER (Wyoming)	20	147	71
SHOSHONE RIVER (Wyoming)	6	171	75
BIGHORN RIVER (Wyoming)	20	142	72
LITTLE BIGHORN (Wyoming)	3	105	70
TONGUE RIVER (Wyoming)	10	113	71
POWDER RIVER (Wyoming)	9	118	71
LOWER YELLOWSTONE BASIN (	48	136	71

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.



Federal Building, Room 443
10 E. Babcock
Bozeman, MT 59715

Montana
Basin Outlook Report

Natural Resources Conservation Service
Bozeman, MT